IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

- - -

COMCAST CABLE COMMUNICATIONS, : CIVIL ACTION NO. 12-0859
LLC, et al., :
       Plaintiffs :
        :
       v. : Philadelphia, Pennsylvania
        : February 9, 2017
SPRINT COMMUNICATIONS : 1:42 o'clock p.m.
COMPANY L.P., et al., :
       Defendants :
. . . .

AFTERNOON SESSION - DAY NINE
BEFORE THE HONORABLE JAN E. DUBOIS
SENIOR UNITED STATES DISTRICT COURT JUDGE

- - -

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recording; transcript produced by AAERT-certified
transcribers.

1   (The following occurred at 1:43 o'clock p.m.)

2   AFTERNOON SESSION

3   THE COURT: Good afternoon, everyone. Please be

4   seated.

5   You may proceed.

6   MR. FINKELSON: Thank you, your Honor. Sprint calls

7   Dr. Nathaniel Polish.

8   DR. NATHANIEL POLISH, Duly Sworn.

9   COURT DEPUTY: Please state your full name and spell

10   it for the record, please.

11   THE WITNESS: Nathaniel Polish. It's P-o-l-I-s-h.

12   THE COURT: Good afternoon, sir.

13   THE WITNESS: Good afternoon.

14   THE COURT: Do you have a slide deck for me?

15   MR. FINKELSON: I also have a binder.

16   THE COURT: Fine, both.

17   MR. FINKELSON: May I approach with one for the

18   witness as well?

19   May I approach the witness as well, your Honor?

20   (Pause.)

21   DIRECT EXAMINATION

22   BY MR. FINKELSON:

23   Q   Good afternoon, Dr. Polish.

24   A   Good afternoon.

25   Q   Could you please introduce yourself to the jury, sir?

Polish - Direct   4

1   A   Sure. My name is Nathaniel Polish. I've lived all my

2   life in New York City, live near Columbia University with my

3   family.

4   Q   Can you tell the jury a little bit about your educational

5   background, Dr. Polish?

6   A   Sure. I have a number of degrees from Columbia

7   University. I have a bachelor's in physics that I received

8   in 1984. I have a couple of master's degrees in computer

9   science and I have a PhD in computer science that I received

10 in 1993. The subject of that was various methods of

11 measuring the quality of synthetic speech. So at the time

12 computers spoke in very artificial ways, not like the Siri,

13 and I've been studying ways of measuring the quality of it so

14 that you could have systematic ways of improving the speech.

15   During my academic years at Columbia I was also a

16 lecturer at City College in New York and I was an adjunct

17 professor at Columbia for a couple years. These days I'm a

18 senior research associate or senior research scientist at

19 Columbia.

20 Q   And what do you primarily do for a living, Dr. Polish?

21 A   I own and run a computer technology research and

22 development firm called Daedalus Technology Group. And we

23 basically act as a research and development arm for small

24 companies that bring us their ideas for products or for

25 businesses, and we consult with them on what kinds of

Polish - Direct   5

1 technologies are the right technologies to use. And then

2 often we get involved in building the first stages of their

3 products.

4 Q   And the name Daedalus Technology, where'd you come up

5 with that?

6 A   So Daedalus was a mythical Greek inventor. He's probably

7 best known for inventing the wax wings that Icarus used to

8 escape Crete. He used them outside of spec and flew too

9 close to the sun with them, but he's basically the closest

10 thing we could find to a mythical Greek inventor.

11 Q   And by we to whom are you referring and at what period in

12 your life?

13 A   So the company was started in 1980 when I graduated high

14 school with my 8th grade English teacher. And that's been my

15 primary employer over the years. Mr. Sprecher (ph) my

16 eighth-grade English teacher left the company a long time

17 ago, but all through the years I've run the company and it's

18 grown in size and shrunk in size, depending upon what was

19 going on in my life and what else was going on in the world.

20 Q   Can you give the jury an example of some of the work that

21 you've done at Daedalus Technology Group?

22 A   Well, we've done hundreds of projects, but one that comes

23 to mind somewhat relevant to this case is sometime ago in the

24 late '90s a company called Delivery Now came to us with a

25 problem they were trying to solve. They had a number of

Polish - Direct   6

1 large trucks that they were using for point to point

2 deliveries between warehouses, and they were interested in

3 seeing if they could use those trucks to do smaller

4 deliveries of smaller roads between different points around

5 New York City.

6   So we came up with a way of tracking the trucks

7 fairly precisely around the City streets, and bringing that

8 information back to a central server where we could help them

9 schedule the trucks. So in those days we didn't have cell

10 phones, at least not the kind of phones we have now. They

11 were much simpler devices. So we built the device that had a

12 GPS system in it and then we used a very early cellular data

13 system called CDPD to deliver short messages from the trucks

14 back to a central server so that we could schedule the trucks

15 precisely.

16 Q   And at its peak employment, how many folks were working

17 with you at Daedalus Technology Group?

18 A   Well, at the height of the dotcom days, we had about 25

19 programmers working for us, building all kinds of different

20 systems for all the crazy ideas that were floating around.

21 In the dotcom days some of those ideas were very interesting,

22 some of them were fanciful, but it was all a very interesting

23 time.

24 Q   What about your more recent work?

25 A   So now we have I guess it's six people at the company.

1 Right now we're doing – we've just been working on a series

2 of products that were involved in risk management for large

3 companies, so we did a product that is used by airports to

4 assess the interdependencies between different elements in

5 the airport to adverse events, like we're having now.

6   It's often easy to do the big things like plowing

7 the runways and making sure that the control tower works, but

8 a modern airport has got lots of moving parts. It has

9 vendors that sell coffee, it has TSA people, it has parking

10 lots that have to be cleared, a lot of different pieces. So

11 we built a software system that allows the airport to model

12 their operations and make decisions as to where to deploy

13 their resources when something like a snowstorm happens and

14 they have to figure out what things they have to plow first,

15 what things they have to do to make the airport work. I'm

16 sure they were using a similar tool this morning when it

17 started snowing like crazy.

18 Q   Have you also done more academic-focused work?

19 A   Yes. And in fact this past year I spent a lot of time

20 and my company spent some time on a project in Antarctica

21 tracking penguins. So I just spent a month in Antarctica

22 deploying it. It's a scale that's the size of a large

23 suitcase that we embed in the ground. And penguins walk

24 across it and we weigh them, their direction of travel. I

25 also have RFID tags in a bunch of the penguins so when they

Polish - Direct   8

1   cross it we get their identity and their weight.

2   And I deployed that for the first time in the mid

3   1990's and it ran for 20 years, and this year I placed it.

4   So I'm working right now on a number of academic papers

5   related to that work and that will probably consume a fair

6   bit of my time this year as well.

7   Q   Have you also done work as an expert witness, sir?

8   A   Yes. Since the dotcom days when I shrank from 25 people

9   down to six, I had the opportunity to do some expert witness

10   work and I found I enjoyed it, so I do a fair bit of that as

11   well.

12   Q   And does that include expert witness work in patent

13   cases?

14   A   Yes, I does.

15   Q   Have you done work for both plaintiffs and defendants in

16   patent cases?

17   A   Yes, I have.

18   Q   Have you testified on issues of validity in patent cases?

19   A   Yes.

20   Q   Have you rendered opinions that patents are valid?

21   A   Yes, certainly.

22   Q   Have you rendered opinions that patents are invalid?

23   A   Yes, I have.

24   Q   How do you go about deciding whether to take on a

25   particular expert engagement, Dr. Polish?

1   A   Well, I'm fortunate that I get more cases sent to me than

2   I really need to take, so I can be pretty choosy. Mostly I

3   look at whether the patent is in a field that I'm genuinely

4   an expert in, and I also look to see whether the positions

5   that I would need to take in the case are positions that I

6   believe in and can support. And about half the time cases

7   that are brought to me are ones that I take.

8   Q   And then the other half aren't ones you take for what

9   reason?

10 A   It varies a lot of times. It's – there are companies

11 that I don't really want to work for or areas where I have to

12 stretch my expertise, but in many cases I don't necessarily

13 believe in the case, meaning that the wrong side has come to

14 me with the patent and I prefer not to get involved.

15 Q   Can you explain to the jury what you have been engaged to

16 do in this case?

17 A   Sure. In this case was hired by lawyers for Sprint to

18 look at questions of validity of the '870 Patent.

19 Q   Have you done any analysis with respect to infringement?

20 A   No, I've done no infringement analysis at all. That was

21 done by Mr. Planning who you've just heard from.

22 Q   And are you being compensated in connection with this

23 engagement or is company?

24 A   Yes, yes.

25 Q   And is compensation contingent in any way on the outcome

1   of the case?

2   A   No, I'm just paid for my hours. How the case turns out

3   doesn't matter. At least for compensation.

4   A   I was going to say at least to you.

5   Q   It matters to me, but it doesn't matter for my

6   compensation.

7   Q   Have you worked on projects related to messaging

8   technologies?

9   A   Yes. Well, I just mentioned the Delivery Now project

10 with the trucks. There was also a project for a company

11 called Radio (ph) that was a big, complicated security system

12 that was monitoring lots of different sensors in a facility.

13 And depending upon different combinations of sensor firings

14 would make a decision to send messages to somebody who was

15 monitoring the facility. So that system had a central server

16 that looked at sensors and made the decision what to do, and

17 then sent out text messages depending upon what was

18 happening.

19 Q   And is Radio the second matter listed on your slide

20 three?

21 A   Okay.

22 Q   And I should have asked, is this a presentation, Dr.

23 Polish, that you prepared in connection with your testimony

24 here today?

25 A   Yes. Yes, it is.

Polish - Direct   11

1   A   I interrupted you, so please proceed.

2   Q   So another very large project that we did involving

3   messaging was for a company called Place Corp. That was one

4   of these very ambitious dotcom era companies. They were

5   interested in giving out pager or credit-card sized devices

6   to thousands and thousands of people. And there were two

7   screens on it. You would have advertising on one screen and

8   personal messages on another, and you could send text

9   messages to these devices. It also would integrate messages

10 from different environments so you could have text messages

11 and you could have pager messages and you could have messages

12 sent by email and over a website, and it would integrate them

13 all and send them to these different devices. It also had

14 facility to locate these devices so that as you walked

15 through a store, as you were passing an aisle, it might send

16 you a coupon for diapers or something if you were passing the

17 diaper aisle. So it was very message intensive. For that

18 project we wound up integrating directly to Verizon's text

19 messaging gateway, which is probably where I got the greatest

20 exposure to the inner workings of text messaging on cellular

21 networks.

22 Q   Do you also have experience with databases?

23 A   Yes. As part of my PhD work, just as part of the general

24 background that every PhD student had to go through in our

25 department, I would have gone through at least two or three

1 different courses on databases as I recall on for what I call

2 our qualifying exams. There were questions related to

3 databases. Database is a quick foundational technology for

4 computer scientists.

5 Q   Have you built databases yourself?

6 A   Yes. I would guess at least half of the projects I work

7 on involve a database that I've either built myself or I'm

8 utilizing someone else's database.

9 Q   Now I see on slide three you also list a number of

10 professional affiliations. Can you tell the jury what those

11 are?

12 A   Sure. Well, the IEEE is the Institute of Electrical and

13 Electronics Engineers. It's basically a group of several

14 hundred thousand professionals involved in all levels of

15 research applied and otherwise in electrical engineering

16 fields. And the ACM is the Association for Computing

17 Machinery which is mostly computer scientists. And these are

18 just membership organizations I've been part of since my grad

19 school days, and there's sort of an extended community of

20 researchers in these areas.

21 Q   Do you have any patents associated with your work, and

22 have you prepared a slide to show that to the jury?

23 A   Yeah. Over the years depending upon the work I've been

24 doing my clients and sometimes for myself, we find an idea

25 that I've come up with to solve a problem is something which

Polish - Direct   13

1   appears to be unique and new, and so I'll patent it. Most of

2   these patents were assigned to my clients, but with my name

3   on them. Some of them were done in partnership with other

4   people but, yeah, I have seven patents at this point.

5   Q   And have you been involved in the patenting process in

6   connection with your patents?

7   A   Yes. I've been very extensively involved in it. I

8   always have a lawyer working for me as someone to represent

9   me in the Patent Office, but I've written most of the specs

10   of those patents and I've also advised the lawyers about

11   their interaction with the Patent Office in terms of figuring

12   out how to get the patent allowed and what modifications to

13   make.

14   MR. FINKELSON: Your Honor, Sprint moves to qualify

15   Dr. Nathaniel Polish as an expert in the field of the

16   invention of cellular technology, including messaging.

17   THE COURT: Is there any objection?

18   MR. GOETTLE: No, your Honor.

19   THE COURT: We will hear the testimony of Dr. Polish

20   on the invention of cellular technology, including messaging.

21   MR. FINKELSON: Thank you, your Honor.

22   BY MR. FINKELSON:

23   Q   Dr. Polish, let's talk about the '870 Patent. Have you

24   analyzed the '870 Patent in connection with this engagement?

25   A   Yes, I have.

Polish - Direct   14

1   Q   And can you explain to the jury what you've done in

2   connection with that analysis?

3   A   Well, I looked at the patent, I looked at what's called

4   the file history for the patent, and the file history for the

5   re-exam on the patent.

6   I don't recall if file issues have been brought up

7   in the case so far, so I'll just say file histories are

8   documents that the Patent Office maintains that contains the

9   entire interaction between the patentee and the Patent Office

10 from the time that it was first filed until it's ultimately

11 allowed. So when you look at the file history, you see the

12 first application, you see the Patent Office writing letters

13 back and forth to the inventors. And usually the Patent

14 Office will bring up some pieces of prior art that they found

15 that the Patent Office thinks maybe makes the patent not

16 valid, then the patentee comes back with responses. So it

17 records the entire interaction between the Patent Office and

18 the patentee.

19 Q   Do you an understanding that there was an initial what we

20 call prosecution of the '870 Patent and also a reexamination

21 that was brought by Comcast?

22 A   Yes. My understanding is it was initially filed by Nokia

23 and then there was a reexam filed by Comcast.

24 Q   Do you have an understanding about how the Nokia patent

25 originated?

Polish - Direct   15

1   A   Yes. So you can see from the slide here, there's a

2   blowup on part of it, the '870 Patent started off as a

3   foreign application was filed in Finland in December 23rd,

4   1999. So it originated in Finland and ultimately was granted

5   in the United States in 2005.

6   Q   And for purposes of your analysis of invalidity in this

7   case as distinguished from infringement, what is the relevant

8   date that you're focused on?

9   A   So I'm focused on December 23rd, 1999, because for

10 invalidity, in order for me to show that the patent is

11 invalid I have to find art that predates the patent and the

12 date that I'm worried about is December 23rd, 1999.

13 Q   Now, you talked about reviewing the file histories; why

14 did you do that?

15 A   Well, I wanted to know how the patent came to me, in

16 particular I wanted to know what art had been before the

17 Patent Office. So you can look at the file history and see

18 all the pieces of prior art that the Patent Office either was

19 given by the patentees or that the Patent Office found on its

20 own, and it was important to understand what art the Patent

21 Office had seen.

22 Q   And what type of art does the Patent Office consider when

23 deciding on the validity of a patent application?

24 A   So the Patent Office considers domestic references, they

25 consider foreign references, they can consider any published

Polish - Direct   16

1   piece of art from anywhere in the world.

2   Q   And is that true with respect to every U.S. patent

3   essentially?

4   A   Yes.

5   Q   And so in deciding whether a patent is valid, can all of

6   that be considered in that process?

7   A   Yes, it can.

8   MR. FINKELSON: Can we actually take a look at the

9   patent, Mr. Baird, the cover page and do a blowout of what

10 Dr. Polish is referring to in terms of references cited?

11   THE WITNESS: Right.

12 BY MR. FINKELSON:

13 Q   So can you explain to the jury again, with reference to

14 the '870 Patent, what types of references were cited here and

15 are generally cited to the Patent Office?

16 A   So you can see where it's in yellow it starts a column

17 that talks about U.S. patents that were cited and then it

18 flows to the top of the next column, there's another U.S.

19 patent there and then there's some foreign patents that were

20 cited. Sometimes you'll see other documents, other

21 publications that are non-patent documents that will follow

22 that, but that's a list on the face of the patent of

23 documents that were considered.

24 Q   Now, the references that you're going to be discussing

25 with the jury in this case, were those ones that the Patent

Polish - Direct   17

1   Office looked at?

2   A   No, they weren't. They were references that were never

3   considered by the Patent Office. So I'm looking at in

4   particular and I'll present to you a reference called Sonera

5   (ph) and a reference called Viaresto (ph), which were never

6   looked at by the Patent Office either in the initial

7   prosecution of the patent or in the reexam.

8   Q   Are those reflected on slide 7 of your presentation, sir?

9   A   Yes.

10 Q   And is the Sonera reference DX-243 that has been admitted

11 into evidence?

12 A   Yes, it is.

13 Q   And is the Viaresto reference DX-242 that has been

14 admitted into evidence?

15 A   Yes, it is.

16 Q   Can you tell the jury, Dr. Polish, what conclusions you

17 have reached in your engagement analyzing the validity of the

18 asserted claims of the '870 Patent?

19 A   So at a high level, I've reached the conclusion that

20 Claims 1.7 and 1.13 of the '870 Patent are anticipated by the

21 Sonera reference, which means that every element of those

22 asserted claims are taught by the Sonera reference.

23   I've also reached the conclusion that in the event

24 that there are parts of the Sonera reference that Dr. Akl

25 thinks don't teach some of the elements that one of ordinary

Polish - Direct   18

1 skill, meaning somebody of ordinary skill at the time of the

2 invention would have known to do those things that were

3 missing. I don't think that's necessary, as I said, I think

4 it was fully anticipated, but one of ordinary skill could

5 have filled in those holes.

6   And then finally --

7 Q   And let me interrupt you one second --

8 A   Yeah.

9 Q   -- and what is the legal term when there's -- that

10 scenario is presented, the one you just described?

11 A   That's called obviousness. So anticipation is when you

12 get everything in one reference and obviousness is when you

13 have to add a little bit more like knowledge of one of skill

14 in the art or as you'll see for the third one another

15 reference, which in this case is Viaresto, which I'm actually

16 using the background section of Viaresto to inform what one

17 of skill in the art would have known at the time. So the

18 Sonera reference plus Viaresto also covers everything in the

19 '870 Patent.

20 Q   And is that also a conclusion under the umbrella of

21 obviousness?

22 A   Yes, it is.

23 Q   Do you understand, Dr. Polish, that it is Sprint's burden

24 to prove invalidity in this case by clear and convincing

25 evidence?

Polish - Direct   19

1 A   Yes. My understanding is that we have to show this -- or

2 I have to show this by clear and convincing evidence, meaning

3 it has to be clear; not just a little bit clear, it's got to

4 be really clear to you that all the elements are found in the

5 references I'm citing.

6 Q   And what is your opinion with respect to that, sir?

7 A   My opinion is that these -- that the Sonera reference and

8 then the Sonera reference plus one-of-skill-in-the-art

9 knowledge, and the Sonera reference plus Viaresto, are all --

10 all invalidate the '870 Patent by clear and convincing

11 evidence.

12 Q   Can you explain to the jury at a high level the analysis

13 that you undertook with respect to validity?

14 A   Sure. So I looked at the '870 Patent, the asserted

15 claims in particular, and I looked for the different steps

16 that were in the claims. And then I looked in the references

17 for whether those were all taught in those references.

18 Q   And did you have a primary focus of your analysis beyond

19 looking at all of the elements of the claims?

20 A   Yes. So I think you've already seen in some of the

21 infringement analysis that there were four steps that were

22 being talked about, about querying and then mapping, and then

23 determining and then responding. And I focused particularly

24 on the mapping and determining steps because it seemed like

25 those were the ones that were of primary concern. We had

Polish - Direct   20

1   from I believe one of Dr. Akl's report where he said that the

2   references before the Patent Office taught all the elements

3   of the asserted claims except they didn't teach mapping and

4   determining -- mapping one identifier to another identifier

5   and then accessing -- then using second identifier to access

6   device information.

7   So I was focusing just -- I was focusing mainly on

8   the mapping and determining steps.

9   Q   Can you explain to the jury what you've put together on

10   slide 9?

11   A   Sure. So this is a way to understand about what mapping

12   and determining is, because mapping and determining -- I

13   think you've seen a lot of technology flying around for the

14   last week and a half -- mapping and determining is really

15   something that we do all the time. So this is an example of

16   mapping and determining in a banking context. So if you were

17   to walk up to a teller with your ID and you wanted to get

18   your account balance and you didn't have your account number,

19   you just had your ID, you would go to the teller and hand

20   them your ID. The teller would look at your name and enter

21   that into their database, look up your account number, and

22   use the account number to look up your account balance and

23   then give you back your account balance. So in that context

24   you handing over your ID and asking for your account balance

25   is making the inquiry, the lookup of your name to get the

Polish - Direct   21

1   account number is mapping, that's mapping one identifier,

2   your ID, with the account number, that's the second

3   identifier. The third step is taking that account number and

4   looking up the bank balance, that's determining, determining

5   information, and then four is giving it back to you.

6   So that kind of context of using two identifiers

7   mapped together and then a lookup is a very commonly done

8   thing that the '870 Patent is applying to cellular networks.

9   Q   Do you recognize this as Claim 1 of the '870 Patent?

10 A   Yes.

11 Q   And what have you tried to do in this slide as relates to

12 the prior example of the bank teller that you just gave?

13 A   So this is just showing you how each of the four steps

14 I've gone through in the banking example map to or correspond

15 -- I'll avoid the word map here -- how they correspond to the

16 different elements of the claim, of Claim 1. So there's the

17 sending an inquiry, mapping the first identifier to a second

18 identifier, determining information, and then sending a

19 response message. So it's just showing the connection

20 between the example and the patent.

21   MR. FINKELSON: Can we see a side-by-side on that?

22 BY MR. FINKELSON:

23 Q   So using your numbers and your colors can you walk the

24 jury through the relationship, Dr. Polish, between these two

25 figures that you've prepared?

1   A   Sure. So it's just that the first element is sending the

2   inquiry, giving your ID and asking for your balance; two is

3   mapping, looking up your account number; three is determining

4   the information, determining your account balance; and four

5   is sending the response message. So that's really all that

6   mapping and determining is. You know, in the context of a

7   cellular network we'll talk more about what that looks like,

8   but it's looking up one piece of information to get another

9   piece of information, to get yet a third piece of information

10   and return it.

11   Q   All right. Let's turn now to your analysis in this case

12   and I take it you want to start with anticipation?

13   A   Yes.

14   Q   And again, is that with reference to the Sonera

15   reference?

16   A   Yes, it is.

17   Q   Okay. Can you explain to the jury at a high level what

18   anticipation is?

19   A   Right. So this slide is really just from the preliminary

20   jury instructions. I believe the jury has been instructed on

21   this previously and I think you'll be instructed on it again

22   at the end and I don't want to repeat the whole thing, but

23   the first sentence is useful. So, "An invention is

24   anticipated by prior art, that is, is not new if it was

25   already patented or described in a printed publication

1   anywhere in the world before in this case December 23rd,

2   1999."

3   So it can be in any publication at all, it just has

4   to be from prior to this critical date and it just means that

5   the patent is not new.

6   Q   Are you aware that the Court has defined several terms in

7   connection with this case?

8   A   Yes, there's been a number of terms that have been

9   construed by the Court.

10 Q   And I think the jury has heard about a number of those

11 over the initial part of this trial, some of the ones that

12 you're going to be talking about today, maybe ones that

13 haven't previously been addressed, but does slide 13 reflect

14 the Court's definitions of claim terms that also appears in

15 the jury's binders?

16 A   Yes. These are the construed claims and I've tried to

17 apply these terms in my analysis.

18 Q   Sonera, what is it?

19 A   Okay. So Sonera is a foreign patent application that was

20 filed in Finland. Normally you refer to these references by

21 the inventor's names. The inventor in this case is named

22 Woppenami (ph), which we decided after some time no one could

23 pronounce it consistently, so we changed to calling it

24 Sonera, which is the company in Finland that patented it.

25   So it's a Finish patent application that was

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1   published, if you look at the top, it was published in June,

2   1999, which means it was made available in English to anybody

3   in the world who wanted to look at it for purposes of

4   understanding what the state of the art was.

5   Q   And what was the organization who published the Sonera

6   patent application?

7   A   So there's an organization called the World Intellectual

8   Property Organization that's part of the Patent Cooperation

9   Treaty. So it's an organization that publishes these

10   applications all around the world, so you can find patents

11   from all kinds of different countries. In this case it

12   wasn't necessarily an issued patent, it was just an

13   application for a patent, but that disclosed information

14   which we can use to understand what was known at the time.

15   And it published it in 1999 and somewhere else on this it's

16   indicated it was published in English, so it would have been

17   something easy to find.

18   Q   And the publication date I believe you said was June

19   10th, 1999; how does that relate, if you can place it in

20   time, to the '870 Patent?

21   A   So the '870 Patent's critical date is December 23rd, 1999

22   and this is June 10th, 1999, so it's prior art.

23   Q   Now, what's your understanding about the presumption of

24   availability of a prior art reference?

25   A   My understanding for the purposes of an invalidity

1 analysis is that as long as a piece of prior art is publicly

2 available the assumption is that somebody would have known

3 about it or could have known about it. So my job as doing an

4 invalidity analysis is to find the piece of art that was

5 available. If it was hidden away or kept secret or

6 confidential, that would be a problem, but if it's published

7 and generally available then it's considered prior art for

8 the purposes of these analyses.

9 Q   And would the somebody to whom it would be available, is

10 that somebody known as a person of ordinarily skill in the

11 art?

12 A   Yes, it is.

13 Q   And we'll talk some more about that in a few moments.

14   Can you talk to the jury about what Sonera at a

15 general level and then we'll dig into the details?

16 A   Okay. So -- and just go back one slide for a second?

17 Q   Sure.

18 A   Right. So this is Figure 1 of the Sonera reference and I

19 believe the jury will have the full reference available if

20 you -- just so you know what's there.

21 Q   Yeah, and it's DX-243, as we talked about before.

22 A   So this is Figure 1, which we'll dig into some more

23 details in a minute, but if you go to the next slide now.

24 What this is really doing, the Sonera reference is taking the

25 case of you've got an 800 number and normally, in a normal

1 phone system in this time frame you call an 800 number and

2 the phone system switches it to ring an actual phone

3 somewhere. So there's technology within the phone network

4 that takes it when you dial, 1-800-Walmart or something, that

5 it ultimately rings on someone's desk. They were interested

6 in being able to text message in a similar manner, text

7 message a mobile phone, and they didn't have the technology

8 within the phone system to do that.

9   So what's going on here is I'm showing you on the

10 left is a person who's trying to text to 1-800-GET-HELP, and

11 then the system receives that and asks the cell phone system

12 where should we send it to. And so the cell phone system

13 looks in its databases and decides, okay, this is the actual

14 human with a real handset who should receive the text

15 message. And what comes back is then the phone number of the

16 mobile handset of the person who's going to receive the text

17 message and so they can be the ones to receive the text

18 message to 1-800-GET-HELP.

19   So another example would be like today we had a

20 potential snow day for court, there a number you could

21 call, a central number and that central number, you'd like it

22 to be able to map to a real person who could actually receive

23 it and respond to it. And Sonera was creating the technology

24 or discussing the technology to allow that to happen at a

25 time frame when that wasn't so easy to do.

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1 Q   And by text message as opposed to call?

2 A   That's right.

3 Q   Why did -- why in your opinion was the Sonera prior art

4 particularly important?

5 A   So there are a number of reasons, one is that it was the

6 same field as the '870 Patent. So it was directed to a short

7 message telecommunications network comprising a mobile

8 communication network, so it was involving text messages in a

9 mobile communication network.

10 Q   And have you included on this slide 18 an actual excerpt

11 from the Sonera prior art reference?

12 A   Yes. These quotes are from, I think it's indicating on

13 the right from page 1, lines 1 to 5 of the Sonera reference.

14 Q   With the highlighting added by you for emphasis, correct?

15 A   Yes.

16 Q   So same field. What else?

17 A   So also it's in the same network. There's been some

18 discussion and I'm sure we'll discuss a little bit more about

19 different networks. Sonera was aimed at a GSM network. So

20 the same way that the '870 is aimed at a GSM network, it's

21 not limited to an '870 network, but the terminology used is

22 the same. So it becomes easier to compare these two

23 references side-by-side. You don't have some of the

24 arguments about what different elements are called and how

25 they're structured, GSM networks are very similar to each

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1   other. So you would look to the Sonera reference because

2   it's on the same network as the '870 Patent was.

3   Q   Why else in your opinion is Sonera important when

4   considering the validity of the '870 Patent?

5   A   So it's they're both solving the same problem. So these

6   are some excerpts from the patent that talk about it. One is

7   that it allows an independence of the supplier of the short

8   message center. The service node is implemented as a unit

9   separate from the short message center. So what that's

10   saying is that it allows the short message, the messaging

11   server to be separate from the service node, and the service

12   node here is the cellular network. So it's talking about how

13   it allows the messaging server to be separate from the

14   cellular network or external.

15   The second one here is "directing a short message to

16   a customer-specific VPN subscriber number." So that's it

17   allows the redirection of a short message from a public

18   number to a private number. And then those are -- the

19   references there are shown on the right.

20   There was also a third one, which I don't -- which I

21   didn't get into the slide here, which is on page 3, I think

22   line 26, that maybe we can have that up.

23   Q   Let me see if we can get it up.

24   (Pause.)

25   A   Right. So --

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1   Q   And again, just so the jury knows since we can't hand

2   them full references, is this an excerpt from the Sonera

3   patent application?

4   A   Yes, this is from the Sonera patent application, page 3,

5   starting at line 26, that -- okay, "It comprises a service

6   node" -- service node is their terminology for cellular

7   network -- "implemented in the telecommunication network. It

8   may be implemented as a unit separate from the short message

9   center or it may be implemented as part of the software

10 structure of the short message service center. The essential

11 point is not the form of the implementation, but the

12 functionality accomplished by the service node."

13   So again that's really talking about how you can

14 have the messaging service separate from the cellular network

15 and still operate.

16 Q   So you've talked about the same field, the same type of

17 network, the same type of problem --

18 A   Right.

19 Q   -- as the '870 Patent.

20   MR. FINKELSON: Can we go back to the slides, Mr.

21 Baird? And it's slide 21.

22 BY MR. FINKELSON:

23 Q   And lastly, I think you wanted to show the jury this

24 slide.

25 A   Right. So again the point here is that you're doing the

Polish - Direct   30

1   query and the mapping and the determining and reply so that

2   you can route a message. So ultimately the solution is that

3   you're going to use a database within the cellular network to

4   inform the messaging system how to route a message. So

5   really you have a messaging system that's outside of the

6   cellular network and then it uses information in the cellular

7   network to get routing information to then send the message.

8   Q   So we've talked about same field, same network, same

9   problem, and in your view same solution?

10 A   That's right.

11 Q   And I think now you wanted to walk the jury through a

12 comparison of Sonera in greater detail with respect to the

13 claims of the '870 Patent. Can you explain what's described

14 here on slide 22?

15 A   Okay. So this is back to Figure 1 of Sonera. And what

16 you'll see here is these two boxes on the upper left are the

17 messaging server and I think Dr. Akl talked about being able

18 to draw a box like that around some of these components that

19 operate a messaging server.

20   And then these steps are the same steps we were

21 talking about with the bank teller example. And just a quick

22 summary here, what's happening is the messaging server asks

23 the service node, sends an inquiry. The service node then

24 maps the first identifier to a second identifier in this

25 database, the service node then takes the information that it

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1   gets back and queries the HLR to get information about the

2   destination, and then the information gets sent back to the

3   messaging server.

4   So we'll go into some more detail about that, but

5   that from a high level is what's going on within Sonera.

6   Q   And I know we're going to get into more detail, but I

7   think it may be helpful, can you walk back through each of

8   those four steps again for the benefit of the jury? They've

9   got the claims of the -- or Claim 1 of the '870 Patent on the

10 right-hand side of your slide, can you walk them through each

11 of the various nodes that are shown here in Figure 1 and the

12 steps that are being performed?

13 A   Okay. So step 1 is being done by the messaging server

14 which is sending the inquiry to the service node. The

15 service node is within the network. It then sends a mapping

16 request to this database, which is a database within the

17 cellular network that the service node communicates with.

18 The reply comes back to the service node, which then makes a

19 query to the HLR, which is another kind of database within

20 the cellular network. It replies back with information about

21 the destination and then the service node then takes that and

22 replies back to the messaging server with the routing

23 information about where to send message.

24 Q   Is this Figure 1 of the Sonera patent, obviously with

25 your illustrations on top of it to show what's going on?

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1   A   Yes.

2   Q   And the jury I think heard in the video, which may seem

3   like a very long time ago now, about patent applications and

4   patents and figures in them, but can you just give the jury a

5   sense of the role figures play in patents?

6   A   Well, figures are -- they're informative about what's

7   going on in the patent. Ultimately claims are what determine

8   what is being claimed in the patent, but the figures help

9   inform somebody as to what the embodiment would be.

10 Q   And in deciding whether a patent is valid or invalid, is

11 it appropriate to look at the entire disclosure of the patent

12 including the figures?

13 A   Yes, yes, of course.

14 Q   I believe you next wanted to discuss with the jury Figure

15 2-A of the Sonera patent application, DX-243.

16 A   Right, so I believe the jury has already seen some

17 diagrams a bit like this. This is a, this is a message flow

18 diagram and I've seen some of these before in the trial, so

19 I'm going to assume that you know some of what's going on

20 here. But, across the top are nodes that were from Figure 1.

21 So, there's the messaging server on the upper left, then the

22 service node, then that database, then the HLR and then the

23 MSC.

24 Q   Those relevant things we were just looking at in Figure 1

25 a second ago?

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1   A   Yes and as far as the actual flow going on here, this is

2   really the same thing as the bank teller example. So, what

3   you can see, what I'll take you through is how this flow

4   diagram is actually diagraming the bank teller example. So,

5   I think, well, I'll just take it through here. So, the first

6   thing, the thing that's labeled and I can -- I can do that,

7   there you go. So, that's the query where you go to the bank

8   teller and say, here's my ID, I want my balance information.

9   Then this is the mapping where the teller takes my ID and

10 looks up my account number. And this is where the teller who

11 takes my account number, looks up my balance and this is

12 where it gets sent back. So, we'll look at it in more detail

13 as it pertains to cellphones, but this -- this message flow

14 diagram is really the same thing as what was going on with

15 the bank teller.

16 Q   Let's take them one step at a time, starting with step

17 one.

18 A   Right, so step one is the inquiry. All right, we'll go to

19 the next slide. Right, so the inquiry there, so, here I'm

20 mapping between or I'm connecting between what's in Sonera

21 and what's in the '870 Patent claim. So, that first inquiry

22 is sending an inquiry from the messaging server to the

23 cellular network to determine said information related to the

24 terminal inquiry comprising a first identifier and

25 identifying said terminal. First identifier being a specific

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1   identifier external to the cellular network. So, what that

2   is, is that's a query from the messaging server with the 800

3   number, which is the first identifier to the service node,

4   which is the cellular network.

5   Q   And on your Slide 25, is the Figure 2-A from the Sonera

6   Patent application?

7   A   Yes.

8   Q   And then on the right-hand side of the screen under the

9   Number 1, what's that?

10   A   That's a part of Claim 1 of the '870 Patent.

11   Q   And then as we're about to look at the following steps,

12   are they going to have the same structure, Sonera Patent

13   Application Figure 2-A on the left and the language on Claim

14   1 of the '870 Patent n the right?

15   A   Yes, that's how I'm going to do it. I'll go through it

16   with the step on the Sonera reference and I'll show how it

17   connects to a part of Claim 1 of the '870.

18   Q   How about the second step?

19   A   So, here, this is and this is very well labeled, this is

20   the service node making a query to the database. MSISDN is

21   just GSN language for the phone number. So, here's it's

22   making a query with the phone number to this database and the

23   result that comes back is the new phone number. So, it's

24   very clear here, it's providing what the 800 number and what

25   it gets back is the number of the person who you actually

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1   want to send the message to. And if you go to the next

2   slide, you can see mapping said first identifier to a

3   specific second identifier, so that's one phone number to

4   another phone number, in the cellular network. The second

5   identifier being an internal identifier of the cellular

6   network. So, there, the idea is the 800 number is an

7   external number that everybody knows, it's advertised and

8   then the phone number of the person who's going to receive

9   the text is not an advertised number. It's some private

10   number that that person has and that's the person who's going

11   to be responding to a request for help or you know, weather

12   information for the court.

13   Q   Do I need to come to court today?

14   A   Right.

15   Q   All right, how about the third step?

16   A   All right, so the third step is then you've now gotten

17   the new MSISDN and now you make a request to the HLR for

18   information and then you get information back. Now the HLR,

19   I think there's been some discussion as to what it is. But

20   the HLR is the -- is a database within the cellular network

21   that contains information about a particular phone. So, it

22   will tell you whether I'm located in New York or in Dallas.

23   It will tell you whether my phone is online. So, it's a

24   register that's used by the cellular network to make routing

25   determinations. So, what's going on here is the new MSISDN

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1   is used to query the HLR for information about the

2   destination cellphone and that information comes back.

3   Q   And how does that compare to the third step of Claim 1 of

4   the '870 Patent, in your opinion, sir?

5   A   So, that's determining said information relating to the

6   terminal with the aid of the second identifier -- aid of said

7   second identifier. So, it's exactly the same thing. It's

8   just taking this second identifier, the new phone number and

9   it's finding out information, location information about the

10 destination terminal.

11 Q   Let's turn to the 4th step.

12 A   So, this is just a reply going back to the messaging

13 server with routing information about the terminal.

14 Q   And how does that compare with the 4th and final step of

15 Claim 1 of '870 Patent?

16 A   Okay, so that's sending a response message in response to

17 said inquiry from the cellular network to said messaging

18 server external to the cellular network in which response

19 message the information relating to said terminal is

20 indicated with the aid of the first identifier. So, what's

21 happening there is -- this is all happening with the aid of

22 the first identifier, because we're using the initial phone

23 number, which is the first identifier, to make this whole

24 process work. And it is connecting to a messaging server

25 that's external to the cellular network. And it's providing

Polish - Direct   37

1   information related to the destination terminal.

2   Q   Is there also a transaction identifier that is used

3   throughout the course of the process in Sonera?

4   A   Yeah, so what's happening at a greater level of detail

5   than I'm going through here, is all of these messages are

6   actually tagged internally and you can look in the patent,

7   there's a description of them. It's quite technical and

8   tedious, but there's, I think it's called a response ID that

9   all these messages have a response ID tied to them, so that

10   links all these messages together. So, that's how the first

11   identifier is then used to knit the whole thing together.

12   Q   What are you describing for the jury in Slide 32, sir?

13   A   All right, so this is just a summary that summarizes that

14   these four steps in Figure 2 of Sonera line up perfectly with

15   these four steps of the '870 Patent. You've got the sending,

16   the mapping, the determining and the sending of a response in

17   the '870 are exactly what's happening within the Sonera

18   reference.

19   Q   Now, in a number of those elements, in fact, maybe in all

20   of them, there are references to identifiers.

21   A   Yes.

22   Q   Did you take into account the Court's constructions

23   regarding those identifiers in your analysis that Sonera

24   anticipates Claim 1 of the '870 Patent and if so, how?

25   A   Well, so we have here in the slide what the Court said

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1   about the identifiers. So, just going through them, a

2   specific identifier external to the cellular network, which

3   is the -- that's the first identifier, means a specific

4   identifier used outside and inside the cellular network to

5   identify a specific wireless terminal. That's going to be

6   the 800 number. Then there's an internal identifier of the

7   cellular network, which is the second identifier, means an

8   identifier used inside the cellular network to identify a

9   specific wireless terminal, which may but need not be

10 revealed outside the cellular network. So, that's the

11 individual's cellphone, who is going to be receiving the

12 message. So, that's a message which -- that's an identifier

13 you're not publishing that gets used internally, but could be

14 used outside.

15 Q   In the Sonera reference?

16 A   In the Sonera reference. And the last is with the aid of

17 the first identifier, which means, the Court says means with

18 the aid of the first identifier, where the first identifier

19 may, but need not be included in the response message. So,

20 what that means is that's -- the Court was making it clear

21 here that in the response message, you don't have to include

22 the first identifier. So, the response message just has to

23 be obtained with the help of the first identifier, but it

24 doesn't have to include the first identifier. So, in this

25 case, in Sonera, the response ID is used -- is what's used

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1   when the message comes back. But the messaging server knows

2   it was relevant to the first identifier because it was

3   tracking the whole process.

4   Q   So, in view of this analysis that you've conducted and

5   I'll give you a second there to get a glass of water. It

6   seems only fair. In view of this analysis that you've

7   conducted with respect to the Sonera reference, what

8   conclusions have you reached with respect to Claim 1 of the

9   '870 Patent?

10 A   Well, I've concluded that all of the elements of the

11 Claim 1 of the '870 are disclosed within the Sonera

12 reference. So, a little check boxes next to each of the

13 elements showing that each of them have been found in the

14 Sonera reference.

15 Q   And can you just walk through those on an element-by-

16 element basis?

17 A   Sure, so step one is sending in inquiry from the

18 messaging server to the cellular network to determine said

19 information relating to the terminal. The inquiry comprising

20 a first identifier identifying said terminal. The first

21 identifier being a specific identifier external to the

22 cellular network. That's present in the Sonera reference.

23   Mapping said first identifier to a specific second

24 identifier in the cellular network. The second identifier

25 being an internal identifier of the cellular network. That's

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1   found in the Sonera reference.

2   Determining said information relating the terminal

3   with the aid of the second identifier and that's found in the

4   Sonera reference. That's the -- what came back from the HLR.

5   Sending a response message in response to said inquiry from

6   the cellular network to said messaging server external to the

7   cellular network in which response message, the information

8   relating to said terminal is indicated with the aid of the

9   first identifier. And that's also found in Sonera. So, each

10 of those elements are found in Sonera.

11 Q   And as a consequence of that, what is your opinion with

12 respect to Claim 1 in Sonera?

13 A   So, as a consequence of that, Claim 1 is anticipated by

14 the Sonera reference.

15 Q   Have you also evaluated dependent Claim 7 of the '870

16 Patent?

17   THE COURT: Before we get there, why don't we have a

18 stand up. It's pretty heavy testimony. I think the jury

19 might appreciate standing up and just relaxing for a few

20 minutes.

21   MR. FINKELSON: Absolutely.

22   (Pause.)

23   THE COURT: Okay, let's get back to work. We're on

24 Claim 7 now.

25   MR. FINKELSON: Thank you, your Honor.

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1   Q   I'm on Slide 35, Dr. Polish and I believe you were

2   turning to your analysis with respect to dependent Claim 7.

3   We should benefit from the analysis that you already did with

4   respect to Claim 1, right? Can you explain to the jury what

5   you found with dependent Claim 7 as it relates to your

6   conclusions of invalidity with respect to Sonera?

7   A   Okay, so Claim 7 is dependent on Claim 1, which means

8   that it has -- in order to find it invalid, I have to find

9   that everything in Claim 1 is done or disclosed in the

10   reference and that also what's added in Claim 7 is done.

11   So, in Claim 7, what they're saying is so I'll read

12   it. "A method according to Claim 1, wherein said inquiry is

13   sent to a specific network element of the cellular network

14   and that said network element determines said information

15   relating to the terminal using said second identifier." So,

16   what that means is that steps one and three have to be done

17   by the same element. So, what I'm showing you here is that

18   the service node, which is an element within the cellular

19   network, receives the inquiry and it also is what does the

20   determining by making a query with the HLR. So, this is

21   showing that Sonera also anticipates Claim 7.

22   Q   Do you reflect that on your Slide 36?

23   A   Right, so this is just the little check mark slide, which

24   I've added at the bottom, Claim 7, a method according to

25   Claim 1, wherein said inquiry is sent to a specific network

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1 element of the cellular network and the said network element

2 determines said information relating to the terminal using

3 said second identifier. So, that's basically a shorthand for

4 showing that I find that Claim 7 of the '870 is anticipated

5 by the Sonera reference.

6 Q   Have you also analyzed Claim 113 of the '870 Patent

7 vis-a-vis Sonera?

8 A   Yes, I have.

9 Q   Can you explain to the jury that analysis?

10 A   So, Claim 113, it's a little bit complicated how it

11 exactly relates, but it basically means it adds to what we've

12 been talking about, the requirement that wherein the mapping

13 is not performed by a home location register or HLR. So,

14 that's just showing that the mapping we were talking about,

15 which was done in the database that does the look up between

16 the two phone numbers, that's that not done by the HLR, which

17 is the case in the Sonera reference.

18 Q   Is that reflected in Figure 2-A of the Sonera reference?

19 A   Yes, that's showing that the mapping step or step two, as

20 we've been doing it or the ID to account number look-up is

21 done with this database that's a different database from the

22 HLR.

23 Q   One what claim is Claim 113 dependent?

24 A   Okay, so this is, this is -- it's a little bit

25 complicated. So, 113 is a dependent claim on 112 and 112

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1   looks almost exactly like the combination of Claims 1 and 7.

2   There's slight difference in the ordering of things and you

3   can see it on the slide here. It shows you Claim 112 and all

4   the different steps here and I've labeled them with the same

5   numbers and colors as I've been using all the way along. And

6   you can see that steps one, two, three and four are present

7   from Claim 1 and you can see that step six is what we've just

8   added the not using the HLR. And at the bottom is where the

9   inquiry is being sent to the same element as what's doing the

10   determining.

11   Q   As a result of that, have you reached a conclusion with

12   respect to Claim 113 of the '870 Patent as it relates to the

13   Sonera reference?

14   A   Yes, so this slide is another check box slide that's

15   adding 113.

16   Q   And what is your conclusion with respect to Claim 113?

17   A   That it is anticipated by the Sonera reference.

18   Q   So, to summarize with respect to anticipation in Claims

19   1, 7 and 113, having analyzed the Sonera reference and the

20   '870 Patent, what are your conclusions, Dr. Polish?

21   A   Well, my conclusion is that the Sonera reference contains

22   every element of the asserted claims of the '870 and it pre-

23   dates it, so it therefore, anticipates the '870 asserted

24   claims.

25   Q   Let's move on to obviousness. Can you explain to the

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1   jury what obviousness is, again, with the benefit of the

2   Court's constructions?

3   A   Yes. So, again, looking at the top of this, it says,

4   "Even if an asserted claim may not have been identically

5   disclosed or described in a single item of prior art, the

6   asserted claim is invalid if it would have been obvious to a

7   person of ordinary skill in the field of the technology of

8   the patent, at the time the invention was made."

9   So, the idea there is that there's this hypothetical

10 person, there's a person of ordinary skill in the art at the

11 time of the invention, who would have been assumed to have

12 certain kinds of knowledge that that kind of person has. And

13 that you can apply that knowledge along with a reference to

14 slightly expand or fill in holes that there might be in

15 what's disclosed in that reference.

16 Q   And have you reached conclusions in this matter with

17 respect to whether or not the '870 Patent is obvious?

18 A   Yes, I have.

19 Q   You mentioned the person of ordinary skill, have you

20 applied a definition of the person of ordinary skill in the

21 art as applies to the field of the invention of the '870

22 Patent?

23 A   Yes, I have.

24 Q   And is this your definition that you have used in Slide

25 42?

1   A   Yes, this is the definition that I've used. So, a person

2   of ordinary skill, again, from the time of the patent which

3   would have been 1999, is a person with a Bachelor's Degree in

4   Electrical Engineering, Computer Science or a related field.

5   And at least two years of experience in the operation,

6   networking, standards and/or design of telecommunications

7   networks that involve messaging, gained through education,

8   work or other experience. So, that's kind of a mouthful.

9   It's basically you get somebody with a Bachelor's Degree plus

10 a couple of years of actual hands-on experience with

11 networking systems that did involve networking. And that

12 kind of person would also be presumed to have knowledge in

13 things like databases. I think you had testimony a few days

14 ago, I can't quite remember how many days ago, from a

15 witness, Tirana, I think he was talking about educational

16 background and he mentioned the databases were things that

17 people have known about forever and that was common

18 knowledge. My own educational experience would lead me to

19 that, as well. So, the person who I'm thinking of is the

20 person who's interpreting these references is somebody with

21 this skill set.

22 Q   And do you understand that Dr. Akl has come up in this

23 case with a different definition of the person having

24 ordinary skill in the art?

25 A   Yes, I have.

Polish - Direct   46

1   Q   Have you conducted your analysis with respect to

2   invalidity under both your definition and Dr. Akl's

3   definition?

4   A   Well, I looked at his definition and if his definition

5   were adopted, it wouldn't change my opinions. I think the

6   person he's defining is not -- is not one of -- is not

7   different from the point of view of this analysis.

8   Q   And are you, sir, at least a person of ordinary skill

9   under either your definition or Dr. Akl's definition?

10   A   Yes, certainly.

11   Q   And have you applied this person having ordinary skill in

12   the art definition that you've included on your Slide 22, to

13   your invalidity analysis in this case?

14   A   Yes, I have.

15   Q   So, with respect to your obviousness analysis, did you

16   account for the Court's claim constructions?

17   A   Yes, I did.

18   Q   Are those constructions reflected, again, here on Slide

19   43?

20   A   Yes. I'm always applying the Court's construction as best

21   I can and from the point of view of someone of ordinary

22   skill.

23   Q   Let's talk about your actual conclusions with respect to

24   obviousness. Can you tell the jury what those are one at a

25   time?

Polish - Direct   47

1 A   Sure, so, as I said before, I believe that the Sonera

2 reference anticipates and that everything is expressly in the

3 Sonera reference that is required to invalidate the '870, the

4 asserted claims of the '870 Patent. But I know that Dr. Akl

5 has brought up certain criticisms of my analysis and my

6 analysis is that the items that he brings up would have been

7 something that would have been things that would have been

8 obvious to someone of ordinary skill. I don't recall if we

9 have a slide on that.

10 Q   I think we go to Viaresto on that.

11 A   Okay.

12 Q   So, with respect to --

13 A   Yeah.

14 Q   -- this issue of Sonera plus the knowledge of ordinary

15 skill, you reference some of Dr. Akl's critiques with respect

16 to things that he believes are missing in Sonera. Have you

17 looked at those?

18 A   Yes. I mean, in particular, there's a question of

19 whether Sonera talks about an external messaging server and

20 certainly, one of ordinary skill would have known that GSM

21 networks are disclosing external messaging servers, those

22 were in the standards and the specs for GSM and someone of

23 ordinary skill would have known that.

24 Q   So, what is your conclusion with respect to Sonera plus

25 the knowledge of one of ordinary skill in the art?

Polish - Direct   48

1   A   So, my conclusion is that Sonera plus the knowledge of

2   one of ordinary skill, would have rendered or renders the

3   '870 Patent obvious.

4   Q   You also look at another prior art reference in

5   connection with Sonera. Can you explain that exercise to the

6   jury, why you undertook it and what conclusions it led you

7   to?

8   A   Sure. So, I was looking for a reference that I could

9   combine with Sonera that would also would bolster the -- some

10   of the items in Sonera that Dr. Akl was criticizing. So, I

11   found another reference called Viaresto that if you combine

12   Sonera and Viaresto with knowledge of one of ordinary skill,

13   that combination renders the '870 invalid as being obvious.

14   Q   And we're going to look at that now in some more detail?

15   A   Yes.

16   Q   Can you explain to the jury what Viaresto is, what

17   reference that is?

18   A   So, Viaresto is, is a foreign application like the one we

19   just looked at. It was published in June of 1999.

20   Interestingly, it comes from Nokia, who is the original

21   assignee of the '870 Patent. The patent -- this was made

22   available in June, '99 from a foreign application for work

23   that was done back in the November of '97 and the lead

24   inventor was Viaresto.

25   Q   And specifically, did it have a - does the Viaresto or

Polish - Direct   49

1 what has been identified as Viaresto, which is DX-242, does

2 it have an international publication date of June 3, 1999?

3 A   Yes, it does.

4 Q   And how does that relate to the priority date of the '870

5 Patent?

6 A   So, the '870 Patent's priority date is December 23, 1999

7 and this is six months before that. So, it's considered

8 prior art for the purposes of this analysis.

9 Q   And was Viaresto published by the same organization as

10 Sonera?

11 A   Yes, it was and it was also published in English, at that

12 time.

13 Q   Now, why, in your opinion, Dr. Polish, would someone in

14 the field, a person of ordinary skill in the art, have looked

15 to Sonera and Viaresto together?

16 A   So, it's the same analysis we've done before, where it's

17 involving messages being transferred, having external

18 messaging servers and a cellular network and getting routing

19 information from that network. So, it's the same, it's the

20 same problem.

21 Q   And on Slide 47, are you depicting text and a figure from

22 the Viaresto patent application, DX-242?

23 A   Yes, so what's happening here is that the text says,

24 "messages inquiring about the service profiles is able to

25 direct the message to the correct subscriber." So, what's

1   happening here, this is Figure 1 from Viaresto and you can

2   see in the lower right-hand corner is this messaging server,

3   which I circled. And it's external to the cellular network,

4   which you can see here. And it's making querys of the

5   cellular network to get routing information. In Viaresto,

6   what happens just what we're really interested in Viaresto is

7   what it talks about as background information. But Viaresto,

8   as an invention is looking up profiles that people have that

9   would say, for example, if you had a work profile or a home

10   profile or a vacation profile, would rout your messages

11   differently depending upon which profile you had selected.

12   So, the system would rout your messages to say, voicemail, if

13   you were on vacation or to somebody else if you were at home.

14   Q   And were Nokia and Sonera both companies operating in

15   Europe at the relevant time?

16   A   Yes, so all of these references are talking about

17   cellphone networks in Europe running on GSM networks. So,

18   the vocabulary that they're using and the problems that

19   they're trying to solve are all very closely related because

20   it's the same kinds of networks at the same time frame.

21   Q   Do Viaresto and Sonera both deal with SMS messaging in a

22   GSM network?

23   A   Yes, they do.

24   Q   Is that another one of the reasons why, in your opinion,

25   one of ordinary skill in the art would have looked to combine

Polish - Direct   51

1   Sonera and Viaresto together?

2   A   Yes, yes.

3   Q   Are both Sonera and Viaresto also about a messaging

4   server looking up information about a phone?

5   A   Right, well, they're both, as I said about Viaresto, it's

6   using a profile to figure out where to send the message, so

7   it's looking up information about where to send it, what

8   phone to send it to same as Sonera is.

9   Q   And how exactly have you used the Viaresto reference in

10 your analysis of obviousness for the combination of Sonera

11 plus Viaresto?

12 A   So, I've looked at the -- I've looked at some elements of

13 Viaresto to bolster my arguments about Sonera.

14 Q   And when you say bolster your arguments, specifically in

15 response to what?

16 A   Well, to Dr. Akl's criticisms of my analysis of Sonera.

17 Q   Do you think those criticisms are right?

18 A   No, no, I think as I've taken you through it, Sonera

19 discloses each element of the asserted claims.

20 Q   But you've gone an extra step with respect to this

21 combination?

22 A   That's right, I'm going an extra step just to make it

23 completely clear and in fact, in Viaresto, I'm not really

24 using the invention of Viaresto, I'm using the background

25 sections in Viaresto, so you can see what the patentee in

Polish - Direct   52

1   Viaresto thought was just background knowledge at the time of

2   the filing of the patent.

3   Q   So, if Dr. Akl is correct that the Sonera reference does

4   not disclose an external messaging server, what is your

5   opinion with respect to the combination of Sonera and

6   Viaresto with respect to that element of the claim?

7   A   Well, Viaresto is completely explicit here by showing you

8   this messaging server outside the cellular network. So, in

9   Sonera, as I showed you, they talked about keeping the

10 cellular network and the messaging server separate. If

11 that's not enough for you to be sure of it, you can see in

12 Viaresto, they've got this figure that shows you the

13 messaging server actually outside the cellular network.

14 Q   And how is the messaging server labeled in Figure 1 of

15 Viaresto?

16 A   So, it's labeled as SMSC, short message service center.

17 Q   And have you highlighted that node in your Figure 48?

18 A   Yes.

19 Q   And I recall with respect to Sonera, you drew a box

20 around the SMSC and another component and you referred to Dr.

21 Akl's testimony, does that also apply to your analysis of

22 Viaresto and can you explain that to the jury?

23 A   Sure. So, what's going on here is this is -- so this is

24 the external messaging, that's the messaging server external

25 to the cellular network. That's what's sending the inquiry,

1 it's sending the inquiry to the inside of the network there.

2 So, if I go through the whole steps in this one?

3 Q   My question was really and is it your opinion that it was

4 known in the art to combine those two boxes that you have

5 drawn, red boxes around or to keep them as stand-alone

6 devices?

7 A   Yes, it was certainly known that you could draw those

8 boxes to make them separate or combine them. Dr. Akl talked

9 about that and there's some text, which I showed you from the

10 other patent that talked about whether you could move the

11 functionality in or out of those boxes.

12 Q   And by the other patent, are you referring to the Sonera

13 Patent --

14 A   Sonera.

15 Q   -- application?

16 A   Yes.

17 Q   What else did you look to Viaresto for?

18 A   So, Viaresto is doing a mapping of a first and second

19 identifier. So, one of the criticisms that Dr. Akl brought

20 was that Sonera, it was mapping a phone number to another

21 phone number and I think that's completely legitimate and

22 fine, that it doesn't raise a problem. But just to be

23 completely sure, if you look at Viaresto, it talks about

24 mapping an MSISDN to an IMSI, which is exactly how it appears

25 in the '870 Patent. So, again, I don't think it's necessary,

Polish - Direct   54

1   but Viaresto frames it in exactly the same language as the

2   '870 Patent does.

3   Q   Based on that analysis, can you tell the jury what

4   conclusions you have reached with respect to the combination

5   of Sonera and Viaresto as applied to Claim 1 of the '870

6   Patent?

7   A   So, my conclusion is that the combination of Sonera and

8   Viaresto renders Claim 1 of the '870 Patent obvious. And

9   I've indicated that here on my slide with a little

10 check-plus, the pluses are where I get bolstering, I get

11 bolstering from Viaresto. So, I'm getting it from the steps

12 one and four because the external messaging server and in

13 step two, for mapping because the identifiers are exactly the

14 same identifiers as identified in the '870 Patent.

15 Q   Have you also looked at the combination of Sonera and

16 Viaresto as it applies to Claim 7 of the '870 Patent?

17 A   Yes, I have.

18 Q   And what conclusions have you reached there, sir?

19 A   That it also, that the combination of Sonera and Viaresto

20 also invalidates Claim 7 of the '870 Patent.

21 Q   And it invalidates it on what basis, sir?

22 A   Because each of the elements of Claim 7 and the claim

23 that it depends on, Claim 1, are present in the combination.

24 Q   And as a result of that, your conclusion is that that

25 Claim 7 is --

Polish - Direct   55

1   A   Is obvious in light of those two references.

2   Q   Have you reached any conclusions with respect to Claim

3   113 of the '870 Patent as relates to Sonera plus Viaresto?

4   A   So, same argument that Claim 113 is rendered obvious by

5   the combination of Sonera and Viaresto. That all the

6   elements of Claim 113 are present in that combination.

7   Q   For each of your conclusions with respect to anticipation

8   and obviousness in this case, have you looked at each of the

9   elements of the asserted claims?

10 A   Yes, I have.

11 Q   And have you conducted your analysis and reached your

12 conclusions with respect to anticipation and obviousness on a

13 claim-by-claim basis?

14 A   Yes, on a claim-by-claim basis.

15 Q   And in final summary, what conclusions have you reached,

16 Dr. Polish, with respect to the invalidity of the asserted

17 claims of the '870 Patent?

18 A   Well, first and foremost, that the asserted claims,

19 Claims 1, 7 and 113 of the '870 Patent are anticipated by the

20 Sonera reference. That everything that is in those asserted

21 claims is disclosed in the Sonera reference. Then I also

22 find that in view of knowledge of a person of ordinary skill,

23 that the claims of the '870 Patent would have been obvious

24 given the Sonera reference. And then finally that the

25 combination of Sonera and Viaresto render obvious Claims 1, 7

Polish - Direct   56

1   and 113 of the '870 Patent.

2   Q   And again, as a reminder to the jury, was the Sonera

3   reference in front of the United States Patent Office during

4   either the original prosecution of the '870 Patent or the re-

5   examination brought by Comcast?

6   A   No, neither of these references were considered by the

7   patent office. They didn't have the opportunity to look at

8   them.

9   Q   Thank you, Dr. Polish.

10   MR. FINKELSON: No further questions at this time.

11   THE COURT: Yes, when an attorney is faced with the

12 task of cross-examining a witness, looks at the clock and

13 it's anywhere near recess time, we generally recess. I know

14 that because I did it over and over and over again as a

15 lawyer. We'll take a ten-minute recess. It's ten minutes

16 after 3:00.

17   THE DEPUTY CLERK: All rise.

18   (Jury exits.)

19   THE COURT: We're in recess for ten minutes. You

20 may step down.

21   (Court in recess 3:10 to 3:27 o'clock p.m.)

22   THE COURT: Be seated, everyone. What we ought to

23 talk briefly about is the schedule. I guess a lot depends on

24 how long the cross-examination will be?

25   MR. GOETTLE: I'm apparently notoriously bad at

Polish - Direct   57

1   timing, but I'm hoping to be done today.

2   THE COURT: Well, then we'll go to sidebar day end

3   and figure out where we're going.

4   MR. FINKELSON: Thank you, your Honor.

5   (Discussion off the record.)

6   THE DEPUTY CLERK: All rise.

7   (Jury enters.)

8   THE COURT: Be seated, everyone. Mr. Goettle?

9   CROSS-EXAMINATION

10   BY MR. GOETTLE:

11   Q   Good afternoon, Dr. Polish.

12   A   Good afternoon.

13   Q   I'm Dan Goettle, we met at your deposition a little while

14   ago. It's nice to see you again. Dr. Polish, you started

15   off, well, you started off kind of talking about burden of

16   proof, but I think the record might warrant some

17   clarification. So, it's Sprint's burden to prove that the

18   patent is invalid, correct?

19   A   Correct.

20   Q   And you talked about that that burden is on Sprint and

21   it's got to be really clear, I think are the words that you

22   used?

23   A   It's going to be by clear and convincing evidence.

24   Q   By clear and convincing evidence.

25   THE COURT: Mr. Goettle, that's an issue of law on

                          Polish - Cross   58

1   which I will charge the jury. I don't think an expert

2   witness should testify on the burden of proof.

3   MR. GOETTLE: Okay, your Honor. Yes, sir, I thought

4   the witness did testify on the burden of proof.

5   THE COURT: He might have.

6   MR. GOETTLE: Okay.

7   THE COURT: Just to introduce the subject.

8   MR. GOETTLE: I will move along then, your Honor.

9   THE COURT: If you -- well, I will charge you. I

10   think I've already, at the beginning of the case, told you

11   the difference between the burden of proof to prove

12   infringement, which is a preponderance of the evidence. And

13   the burden of proof that is on the defendant, Sprint, to

14   prove invalidity. To prove invalidity, the Sprint side must

15   establish whatever has to be established by clear and

16   convincing evidence. I will give you further instructions on

17   that at the end of the case. That is a more difficult burden

18   then the burden on Comcast to prove infringement, that burden

19   is by a preponderance of the evidence.

20   MR. GOETTLE: Thank you, your Honor.

21   Q   Dr. Polish, during your direct examination you referred -

22   - I think you testified and correct me if I'm wrong, I think

23   you testified that the examiner didn't have the opportunity

24   to review either of the prior art references that you raised

25   on the direct.

1   A   Yes.

2   Q   But in fact, that's not true, right, sir. The patent

3   office had plenty of opportunity to review these references,

4   right?

5   A   Well, the evidence I looked at suggested that they -- it

6   was not before them, it wasn't brought to their attention and

7   so it wasn't before the patent office.

8   Q   Is it your understanding --

9   THE COURT: Dr. Polish, you're back from the mike

10   and we're having trouble hearing.

11   THE WITNESS: Ah.

12   THE COURT: So, if you could move the mike and move

13   closer.

14   THE WITNESS: Okay.

15   Q   So, is it your understanding, sir, that it is up to the

16   applicant applying for the patent to provide the prior art to

17   the patent office and then the patent office only looks at

18   that prior art?

19   A   Well, okay, first of all, I'm not putting myself out as

20   an expert in patent office procedure. I can speak only to my

21   own experience with the patent office. My experience is that

22   you bring art to the attention of the patent office and they

23   look at that art and they may or may not look at additional

24   art. In the case of the '870 Patent, they appeared to have

25   not looked at additional art, particularly with respect to

Polish - Cross   60

1   the re-exam.

2   Q   So, during the original prosecution, did the patent

3   office have the benefit of the International Search Report

4   from the Finnish application?

5   A   I believe the patent office did a certain amount of

6   searching in the original application. I don't remember the

7   exact amount, but they did some amount of searching and they

8   didn't find these references. And they didn't consider these

9   references.

10   Q   Sir, that wasn't my question. My question was did the

11   U.S. Patent Office have the benefit of an International

12   Search Report as a result of the Finnish application? The

13   application in Finland?

14   A   Ah, I don't recall, I don't recall whether they did or

15   not.

16   Q   Okay, but you did review the file, the prosecution

17   history, right?

18   A   Yes, I did.

19   Q   Okay, so what I'm showing -- I can continue even though

20   not on this. Hopefully, it comes on?

21   MR. COSGROVE, ESR: It'll come on.

22   MR. GOETTLE: Thank you.

23   BY MR. GOETTLE:

24   Q   You recognize -- this is -- what I'm showing is PX-3,

25   which is in evidence at page 211, do you see that, sir?

1   A   Yes.

2   Q   Okay and do you see that this is the International Search

3   Report and I just highlighted it?

4   A   Yes.

5   Q   Okay, do you see on here, sir, that what this is saying

6   is that there were certain fields that were searched,

7   classifications of fields that get searched by this body that

8   did the searching, correct?

9   A   Yes.

10 Q   Okay and do you see that one of the fields that got

11 searched was one called HO4Q, do you see that?

12 A   Yes.

13 Q   Okay and you do recognize, sir, that the patent examiners

14 are required to or are only required to list the patents that

15 they found deemed to be most pertinent to the claimed

16 invention, correct?

17 A   They are required to list the ones that they considered.

18 Q   That they considered because they were relevant to the

19 claimed invention?

20 A   The part I don't necessarily know about is the because

21 part. I know that they're required to list the ones that

22 they considered and that Sonera and Viaresto were never part

23 of the lists of references that they considered.

24 Q   That's true, but that doesn't mean that the patent office

25 didn't actually see the references and they decide that they

Polish - Cross   62

1   didn't warrant consideration? You don't know one way or the

2   other, right?

3   A   Well, I know that they did not consider those references

4   in detail. I don't know, I don't know what they didn't write

5   down, but they didn't -- they certainly did not do a detailed

6   analysis of these references.

7   Q   Right, I agree with you, they didn't consider them in the

8   context of actually writing them down on the patent, but that

9   doesn't mean they didn't see them or didn't review them. We

10 don't know whether they did or not, correct?

11 A   Again, I would leave that to an expert in patent

12 procedure. My understanding is that anything that they spend

13 any real time on they put into the file history.

14 Q   Okay, but again, this classification of what did get

15 searched on the International Search Report is H04Q, do you

16 see that?

17 A   Yes.

18 Q   Okay and we see that on the Sonera reference, which is

19 I'm showing you DX-243, the Sonera reference that you

20 testified about, correct?

21 A   Yes.

22 Q   Okay, we see that they did search that same

23 classification, H04Q, do you see that? I'm pointing at both?

24 A   Yes, I see that.

25 Q   Okay, that's Sonera and then over Isto (ph) we see the

                              Polish - Cross   63

1   same classification, correct, a matching of the

2   classification that got searched with the classification of

3   these two references that you're relying on, correct?

4   A   Yes.

5   Q   Can you put up Dr. Polish's Slide 9? Sir, you showed

6   this diagram to the jury earlier today, correct?

7   A   Yes.

8   Q   This is your Slide 9?

9   A   That's correct.

10 Q   Okay and you do recognize that the patent is about text

11 messaging in a cellular network, correct?

12 A   Yes, I do.

13 Q   And the patent is about an external messaging server, a

14 messaging server that is not a core network element of the

15 cellular network sending an inquiry to a cellular network for

16 information about a phone, right?

17 A   Broadly speaking, yes.

18 Q   And included in that is also that the cellular network

19 has to do some work to find out that information and send

20 that information back to the phone, correct?

21 A   What do you mean by do some work? I mean, there's --

22 Q   Well, it has to do mapping, I'm sorry to interrupt you,

23 go ahead.

24 A   -- there's mapping and determining --

25 Q   Yes.

Polish - Cross   64

1 A   -- and this diagram was meant as a way to understand what

2 mapping and determining was.

3 Q   Okay, but you do recognize or do you agree with me that

4 this a very simplistic diagram?

5 A   It was intended as a simple, I don't know about

6 simplistic, it was a simple diagram to make it easy to

7 understand what mapping and determining mean in the context

8 of the patent.

9 Q   Okay, can we go to Dr. Polish's Slide 12? You showed

10 this Slide 12 to the jury on anticipation and what that

11 means?

12 A   Yes.

13 Q   And just to it's abundantly clear, in order for a

14 reference like Sonera, in your opinion, in order for a

15 reference to anticipate, that reference has to disclose each

16 and every element of the claim, right?

17 A   Yes, that's correct.

18 Q   Okay and can we go to Dr. Polish's Slide 16? Okay, Dr.

19 Polish, I put up Slide 16 from the patent, I'd be happy to

20 refer to another figure if it's better for you. But the gist

21 of Sonera is it's about being able to send a text message to

22 a 1-800 number, for example and then have that text message

23 forwarded to another phone?

24 A   That's certainly one significant part of Sonera, that's

25 the part of Sonera I described.

Polish - Cross   65

1   Q   Yeah, that's what you described to the jury, right?

2   A   Yes, it's a way of having a messaging server outside of

3   the network query a database inside the network for routing

4   information to send a text message to a particular mobile

5   device.

6   Q   Okay and it's your opinion that that's the same problem

7   that the '870 Patent was directed to?

8   A   Yes.

9   Q   Okay, can we go to Dr. Polish's Slide 22? Actually, you

10 know what, I'm going to put that up on the Elmo instead.

11 Okay, so you've been, I've seen you, you've been here at the

12 trial. You've been -- oh, do you need help?

13 A   No, I'm just trying to -- that's fine.

14 Q   Okay.

15 A   I'm just trying to make it so that I can look at the

16 screen and look at your or the jury at the same time.

17 Q   Do you want a hard copy? Do you have a hard copy of your

18 slide?

19 A   I do.

20 Q   Okay, well, I'm actually going to draw on it.

21 A   This is better I think, okay.

22   THE COURT: What slide?

23   MR. GOETTLE: Slide -- this is Slide 22, do you

24 recognize this from your presentation as Slide 22, sir?

25   THE WITNESS: Yes.

Polish - Cross   66

1   Q   Okay, so you've been sitting at a fair amount of the

2   trial this week?

3   A   Yes, I have.

4   Q   Okay and so you've recognized one of the big issues in

5   the case is whether the messaging server of Sprint's network

6   is a core network element?

7   A   Yes.

8   Q   Okay, so there's a big question about whether the

9   messaging server is internal or external to Sprint's cellular

10   network?

11   A   Those are slightly different questions, but I'm aware

12   there's a question as to where the messaging server is.

13   Q   Okay and on this slide, you were showing that the

14   so-called messaging server of Sonera is external to the

15   cellular network, correct?

16   A   Yes.

17   Q   Okay and you were combining two different components, but

18   I didn't hear a lot of discussion about what those components

19   do. But you're combining a box called an SMSC or I should

20   say a computer? Is that fair to call that a computer?

21   A   It's a box.

22   Q   A box, okay.

23   A   Yeah.

24   Q   You are combining a box called an SMSC with a box called

25   an SMS-GMSC, correct?

Polish - Cross   67

1   A   Yes.

2   Q   And the reason that you're doing that is because the SMSC

3   here is a messaging center in the GSM standard, correct?

4   A   Yes, it is.

5   Q   Okay and in GSM, the SMSC stores and forwards messages,

6   right?

7   A   That's correct.

8   Q   But it does not send an inquiry, correct?

9   A   Not generally, no.

10 Q   No, because it's this thing called an SMS-GMSC that sends

11 an inquiry, correct?

12 A   That's correct, I've combined the functionality of those

13 boxes as the patent has talked about and as I know Dr. Akl

14 was talked about.

15 Q   You combine the two functions and combine, they need the

16 Court's construction of a messaging server, right?

17 A   I believe so.

18 Q   You believe so or you know so?

19 A   Yes, yes.

20 Q   Yes. Because in the Court's construction of a messaging

21 server, the messaging server has to perform storing and

22 forwarding and also the function of sending an inquiry,

23 correct?

24 A   That's correct.

25 Q   Okay, this SMS-GMSC is what sends the inquiry in Sonera,

Polish - Cross   68

1 right?

2 A   Yes.

3 Q   So, I'm going to write on here sends the inquiry. And

4 this SMS-GMSC is, well, let me step back. There's a lot of

5 acronyms in there, right, sir?

6 A   Yes, there are.

7 Q   So, do you think we could break it apart a little bit for

8 the jury? So, first thing I'd like to do is you agree with

9 me that when it says MSC, that's stands for mobile switching

10 center, right?

11 A   Yes.

12 Q   And the G next to it, that stands for gateway, correct?

13 A   I believe that's right.

14   (Pause.)

15 Q   Are you looking to find out if the G stands for gateway?

16 A   No, go ahead.

17 Q   Oh, I'm sorry. All right, so I'm going to -- and then

18 the SMS, that stands for SMS, right, sir?

19 A   Yes.

20 Q   So, an SMS-GMSC is a mobile switching center that acts as

21 a gateway for SMS, correct?

22 A   Yes.

23 Q   Okay, so -- and stepping back, mobile switching center,

24 MSC, which we've heard a lot about with respect to Sprint's

25 network and the patent, a mobile switching center is a core

1 network element in a GSM network, correct?

2 A   Well, I'm not, I'm not really prepared to sit here and

3 offer an opinion about what's in the core network or not.

4 What I would say is that the combination of the SMSC and the

5 part of the functionality of that Number 2 box that is

6 performing the inquiry is the messaging server as it's

7 described in the '870 Patent.

8 Q   Okay, let me try it this way. Is there any way to

9 implement a GSM cellular network with an external mobile

10 switching center?

11 A   I don't know, I haven't done that analysis.

12   MR. GOETTLE: May I approach the witness with his

13 deposition transcript, your Honor?

14   THE COURT: You may.

15 Q   Sir, I've just handed you your deposition transcript from

16 this case, taken on March 17, 2016, do you see that?

17 A   Yes.

18 Q   Do you recognize this as the deposition of you?

19 A   Yes, I do.

20 Q   Okay, can you turn to page 119, line 9. Are you there,

21 sir?

22 A   Yes.

23 Q   Okay, I had asked you a question, "And there's no way,

24 now let's talk about the MSC, okay, shown there in Figure 2."

25 Figure 2, I don't know if you recall, but do you recall

Polish - Cross   70

1   whether we were talking about the GSM standard when we're

2   referring to Polish 7?

3   A   I mean, I haven't looked at this in a while. I don't

4   recall what Polish-7 was.

5   Q   Well, I'll finish the question and then we'll see if I

6   need to have to find more clarification for you, okay?

7   A   Okay.

8   Q   Okay, so I'm going to read the question again.

9   "Question: And there's now way, now let's talk

10 about the MSC, okay, shown there in Figure 2. Is there any

11 way to implement a GSM cellular network as disclosed, as

12 disclosed in Polish-7 with an external MSC.?

13   "Answer: I believe the MSC is always considered to

14 be internal."

15   Do you see that?

16 A   Yes.

17 Q   Okay, does that help refresh your recollection of what

18 standard we were talking about or what document we were

19 talking about with Polish-7?

20 A   I'd have to look at Polish-7. I think that MSCs are

21 generally internal parts of a network, but that isn't the

22 focus of my analysis and I'd need to see something -- I'd

23 need to see the context more closely to be sure of what this

24 was referring to.

25 Q   But maybe we can find it on page 5. So, we were talking

Polish - Cross   71

1   about Polish Exhibit 7.

2   A   Okay.

3   Q   Now, go to page 5 of the deposition. Do you see that it

4   says Number 7, meaning Exhibit 7, GSM digital cellular

5   telecommunication system, Phase II and then it continues on

6   with a longer title, do you see that?

7   A   Yes, I do.

8   Q   Okay and that was a reference that you had previously

9   presented as a potential invalidating basis, right?

10 A   Yes.

11 Q   Does that refresh your recollection on whether we're

12 talking about the GSM standard in that question and answer

13 that I just asked you?

14 A   Well, certainly, I agree that Polish-7 was the GSM

15 standard.

16 Q   Okay.

17 A   I just don't have, I don't have that figure in front of

18 me.

19 Q   So, you can't say, sitting here right now, whether in a

20 GSM network the MSC is always considered to be internal?

21 A   I guess that you're asking a very broad categorical

22 question there and I would just -- and I'm resisting

23 answering that without -- without further context.

24   Q   What context do you need, the GSM Standard itself?

25 A   Sure.

Polish - Cross   72

1   Q   That we were looking at?

2   A   Yes.

3   Q   Okay. I think we're working on getting that.

4   A   Okay.

5   Q   While we're working on getting that, maybe I'll ask you

6   some other questions.

7   A   Okay.

8   Q   Okay, so going back to your figure here, if the jury was

9   to find -- if the jury was to find that this SMS-GMSC is

10   internal to the cellular network disclosed in Sonera, then

11   they should reject your opinion that the patent is invalid,

12   right?

13   A   What I would say is that Sonera makes it -- Sonera is

14   not, is not making the same distinction about internal and

15   external quite the same way that the '870 is making it.

16   Q   Oh.

17   A   And Sonera, it talks about and I referenced this in my

18   direct, that it talks about it on page 3 of Sonera, it may be

19   implemented as a unit separate from the short messaging

20   service center or it may be implemented as a part of the

21   software structure of the short message service center. The

22   essential point is not the from of the implementation, but

23   the functionality accomplished by the service node. So, the

24   point that I think that Sonera is making is that you can, you

25   can move some of the functionality around from the different

Polish - Cross   73

1 boxes. And that this box Number 2 here is not, is not really

2 rigid. That you can move some of the functionality around.

3 I mean, clearly, the thing which is doing the inquiry must be

4 external and the jury -- that's what I'm telling the jury.

5 Q   Okay, I did not follow. I was trying, but I did not

6 follow you. Let me try it again.

7 A   Okay.

8 Q   Okay, if the jury finds that this SMS-GMSC is internal to

9 the cellular network, then they should reject your opinion

10 that the patent is invalid?

11 A   If the entirety of that box is internal, then the inquiry

12 is coming from inside the network. My argument is that that

13 inquiry functionality can be integrated with box one here and

14 that 's something which the patent, which Sonera talks about.

15 Q   You're saying if the querying comes from the SMSC, then--

16 A   No, if the functionality, if the functionality of the

17 querying is implemented as part of the SMSC.

18 Q   Okay, I don't --

19 A   That's what page 3 is talking about.

20 Q   So, let's go to -- I didn't follow that, so let's go to -

21 - I forget what exhibit Sonera is. Can we go to Exhibit 243.

22   THE COURT: Slide 43 or Exhibit 43?

23   MR. GOETTLE: Exhibit 243, sir.

24 Q   And you were reading from page 3?

25 A   Yes.

Polish - Cross   74

1   Q   Okay, let's go to page 3. And I didn't know, what line

2   were you reading from?

3   A   Starting at line 26.

4   Q   It looks like up to line 26 is one really long sentence

5   from the beginning of the paragraph.

6   A   Okay. So looking then at -- so starting here --

7   Q   I'm sorry -- oh --

8   A   I can actually mark that for some reason on my screen

9   here. "It may be implemented as a unit separate from the

10   short messaging service center or it may be implemented as a

11   part of the software structure of the short message service

12   center."

13   So the point is that they're just saying that you

14   can move some of that functionality around.

15   Q   What is "it"? It says "it" twice in that sentence; what

16   is "it" modifying? The querying?

17   (Pause.)

18   A   I'm looking back up a paragraph.

19   (Pause.)

20   A   I think it's talking about a routing center for routing

21   short messages from the mobile station to the short message

22   service center.

23   Q   Okay.

24   MR. GOETTLE: So, Mr. Dyer, leave that sentence that

25   you have highlighted, and can you scroll up and highlight

Polish - Cross   75

1   what Dr. Polish just read? It starts, "with a routing" --

2   it's right at the top of the box that you have -- "a routing

3   center" -- there you go, yep. And I'll tell you when to

4   stop, go -- yep, and then go to the comma. Okay.

5   BY MR. GOETTLE:

6   Q   So, Dr. Polish, you're telling the jury that when this

7   paragraph is saying "it" in the second portion that's

8   highlighted, the "it" is modifying the routing center four or

9   five lines before, that's your testimony?

10   A   I believe that's what it's talk -- it's talking about

11   that you can take those -- you can take the functionality and

12   between the -- you can implement that functionality in a

13   number of different ways and they're really worried about the

14   functionality, not the specific implementation, and that's

15   referring I believe to the relationship between those two

16   boxes.

17   Q   Okay. So if the jury doesn't agree -- if the jury

18   doesn't agree with your reading of this paragraph and what

19   "it" modifies, then the jury should reject your opinion

20   because then the SMS, that GMSC is sending the inquiry and

21   therefore that inquiry is internal to the cellular network?

22   Do you need me to break it up? Because as I was saying it, I

23   realized it was a really long question.

24   A   That was a really long question --

25   Q   Yeah.

Polish - Cross   76

1   A   -- and also I want to understand whether you're referring

2   to my anticipation analysis or my obviousness analysis; what

3   exactly are you referring to?

4   Q   Well, I'm going to figure that out after I understand

5   your answers to my questions. So let me try again. If the

6   jury reject -- if the jury finds that this SMS-GMSC is

7   internal to the cellular network and in Sonera sending the

8   inquiry, then they should not find that Sonera anticipates

9   the claims?

10   (Pause.)

11   A   If I understand your question, the inquiry has to come

12   from outside the network, and so if the thing which is doing

13   the inquiring is inside the network, then this -- then Sonera

14   would not anticipate.

15   Q   And then at least on obviousness this SMS-GMSC sending

16   the inquiry, on obviousness this cannot form the basis for

17   finding that limitation obviousness, the limitation that

18   requires the inquiry being sent from an external messaging

19   server to the cellular network?

20   A   Well, no, I wouldn't say that.

21   Q   Oh, no?

22   A   No, because it's well known to someone of ordinary skill

23   that GSM networks have external messaging servers. So the

24   GSM specs talk about external messaging servers. So

25   certainly if there's something about Sonera that makes the

Polish - Cross   77

1 inquiry part internal, one would certainly have known that

2 GSM uses external messaging servers at least as a

3 recommendation.

4 Q   You didn't show the jury any GSM standard in your direct

5 examination, correct?

6 A   No. I'm not using it as a piece of prior art, I'm simply

7 saying that that's what one of ordinary skill would know. And

8 you can see that in Varesto where they talk about in their

9 background section -- not their invention, but the background

10 section they have the messaging server external.

11 Q   So to meet the clear-and-convincing-evidence standard

12 you're saying that one of ordinary skill in the art would

13 just know that's how GSM works as opposed to showing what GSM

14 actually says?

15 A   Well, again, GSM is a piece of common knowledge to

16 someone of ordinary skill at the time and you can see that in

17 Varesto as being the background. So I believe Sonera

18 expressly talks about having the messaging server external in

19 the section I'm showing you, but in the event that it doesn't

20 that one of ordinary skill would have known the GSM has

21 external messaging servers.

22 Q   And you actually had previously relied on GSM as an

23 invalidity basis in your opinions and you did not raise that

24 today, correct?

25 A   There were many references that I raised as invalidity

Polish - Cross   78

1   references in my report, I forget how many, but many of them,

2   I focused this down to just these two references to be kind

3   to the jury and to keep it focused on just these references.

4   Q   But so you're not raising the GSM references invalidating

5   for this jury, yet you're pulling GSM in anyway, is that

6   right?

7   A   Well, GSM is the entire field of the invent -- is the

8   entire field of the patent. So when I brought the GSM

9   reference in previously in my expert reports it was using it

10 in a specific sort of way. The knowledge that one would have

11 had, the GSM having external messaging servers is not some

12 specific reference, it's knowledge of what GSM does or how

13 GSM recommends you implement things.

14 Q   Okay. Let's go to --

15   (Pause.)

16   MR. GOETTLE: Sorry, I've got to do a little

17 maintenance here, I lost my place.

18   (Pause.)

19   MR. GOETTLE: I wrote on this, I think I should mark

20 it. I'm going to mark this as Plaintiffs' Drawing 7.

21   (Discussion held off the record.)

22   MR. GOETTLE: 8, I apologize. I'm bad at spelling

23 and bad at math. I'll mark this as Plaintiffs' Drawing 8.

24 BY MR. GOETTLE:

25 Q   This is your slide 27 that you presented to the jury?

1   A   Okay.

2   Q   Do you agree?

3   A   Yes, it is.

4   Q   Okay. And so this is the limitation, you're talking

5   about Sonera -- in this slide you're talking about Sonera

6   disclosing the limitation of mapping said first identifier to

7   a specific second identifier, right?

8   A   Yes.

9   Q   Okay. And even still more acronyms, but this is the

10   result of the mapping, right, this long -- yet another long

11   acronym called MSISDN?

12   A   Well, the result is a new MSISDN.

13   Q   A new MSISDN?

14   A   Yes --

15   Q   Okay.

16   A   -- which is just a phone number.

17   Q   That's what I wanted to know. This is just a phone

18   number. Nothing special about that phone number, right?

19   That's any phone -- that's a phone number that anyone could

20   dial to get the phone to ring, right?

21   A   Well, whether it's dialable is another question.

22   Q   Oh. So it's not just a phone number, because every other

23   phone number is just something you can dial in a phone and

24   get the phone to ring?

25   A   Well, there are some numbers you can and can't dial

Polish - Cross   80

1   depending upon the circumstance. It's a phone number.

2   Q   This is a phone number?

3   A   Yes.

4   Q   Okay. And I noticed that when you walked through this

5   you didn't go back to the Court's claim construction of

6   second identifier, but you do have it in your slide deck,

7   right?

8   A   And I did cover the Court's claim construction with

9   respect to this on, I guess it's slide 33.

10   Q   33? Thank you. And if I didn't hear that during your

11   direct, I apologize.

12   Okay. So what we're talking about is, the question

13   is, right, whether this -- whether a phone number meets the

14   Court's construction of a -- let me keep going on this

15   limitation. So this limitation that we're talking about

16   here, this step of mapping, the result of the mapping --

17   "mapping said first identifier to a specific second

18   identifier in the cellular network, the second identifier

19   being an internal identifier of the cellular network,"

20   correct?

21   A   Yes.

22   Q   Okay. An internal identifier of the cellular network,

23   that's construed by the Court, right?

24   A   Yes, it is.

25   MR. GOETTLE: Plaintiffs' Drawing 9, I'll mark that

1   one.

2   BY MR. GOETTLE:

3   Q   And now I'm showing your slide 33 that you just referred

4   to?

5   A   Yes.

6   Q   And here we see the Court's construction of the second

7   identifier that the part of the -- the part of that

8   limitation I just read that says that it has to be an

9   internal identifier of the cellular network --

10   A   Yes.

11   Q   -- do you see that? Okay. And the Court has construed

12   that as meaning "an identifier used inside the cellular

13   network to identify a specific wireless terminal, which may,

14   but need not, be revealed outside the cellular network." Do

15   you see that?

16   A   Yes.

17   Q   Okay. So there's a lot of words in there, but the part I

18   want to focus on is this notion that whatever the second

19   identifier is, it's an identifier that may, but need not, be

20   revealed outside the cellular network. Do you see that?

21   A   Yes.

22   Q   Okay. And for this part in your hypothetical bank teller

23   example, the second identifier was something that was used by

24   the bank, right?

25   A   The second identifier was your account number.

Polish - Cross   82

1   Q   Was your account number. And that would be something

2   that would be used inside the bank and so it may, but need

3   not be disclosed outside the bank?

4   A   Right. The account number is something that's used

5   inside the bank and which you could disclose outside the

6   bank, but you don't need to.

7   Q   Right, you don't need to. But you have to disclose a

8   phone number outside the cellular network, right, because

9   that's what the purpose of phone numbers are, it's for people

10   to dial the phone numbers?

11   A   Well, the purpose of -- in the example of Sonera, you've

12   got a company publishing an 800 number and then there are

13   phone numbers of the employees that aren't published; you

14   could dial them if you knew them, but they're not published.

15   So in that sense it meets the Court's claim construction that

16   you don't need to publish the number in order to use it, it's

17   simply a number which is used as a second identifier to

18   provide routing information.

19   Q   Okay, I'm going to go back to where we kind of started in

20   the beginning. Anticipation, to find that a claim is invalid

21   by anticipation, the reference has to disclose each and every

22   claim limitation within the four corners of the reference,

23   right?

24   A   Yes.

25   Q   Okay. And that includes applying the claim

Polish - Cross   83

1   constructions?

2   A   Yes.

3   Q   Okay. So where in Sonera is there any disclosure about

4   what you just testified to, I forget how you characterized

5   it, but some sort of number that's only used inside in a

6   business setting where the phone number dialed, the first

7   number dialed is a 1-800 call and then it gets routed to

8   another phone, where in here does it disclose anything about

9   that number never being disclosed or being private or even

10 being part of the problem that Sonera is trying to solve?

11 A   The reference doesn't -- the reference is talking about

12 connecting a published number with another number. So it's

13 solving the problem of how you manage that mapping.

14 Q   Okay. Where does the reference refer to mapping a

15 published number to another number in Sonera?

16   (Pause.)

17 A   So it talks -- first of all, it talks about using a

18 virtual private network, so it's referring the message to a

19 private network. So if you look at page 1, starting at line

20 19 --

21   MR. GOETTLE: Can you go back -- I'm sorry to

22 interrupt you, sir, can you hang on one second? I want to

23 catch up.

24   Can you go to Exhibit 243?

25 BY MR. GOETTLE:

Polish - Cross   84

1   Q   And what page was that?

2   A   Page 1.

3   (Pause.)

4   Q   Okay. What line?

5   A   So there's a bunch of it, so it's probably worth reading

6   a bit of it. Let's start at line 16.

7   (Pause.)

8   A   Okay. So it says, "one of such services is a virtual

9   subscriber number. Calls made to such a number are directed

10   to the subscriber's actual number."

11   Q   Can I pause right there just to make sure that's clear?

12   Is that all right, sir?

13   A   Okay.

14   Q   Okay. So calls made to such a number, that's the 800

15   number?

16   A   That's correct.

17   Q   Okay.

18   A   It's going to make it clearer in a moment.

19   Q   Okay. And then that call is directed to the subscriber's

20   actual number, that's the second phone number?

21   A   That's correct.

22   Q   Okay. Go ahead.

23   A   "Examples of this service are free phone numbers

24   beginning with 0-800 and national call numbers of

25   enterprises." So it's talking about this 800 number that I

Polish - Cross   85

1 was talking about. "And in the virtual private network

2 service individual subscribers are so grouped that the

3 network looks like a private branch exchange to the

4 subscriber."

5   So the point there is that you've got these -- it's

6 making this link between the published 800 numbers and

7 private numbers or subscriber numbers, that's what's going

8 on.

9 Q   Well, you didn't keep going, did you? Why don't we read

10 the next sentence. It says, "Calls can therefore be made

11 from a mobile station to another mobile station or to an

12 ordinary telephone connected to the branch by using only

13 extension numbers," right?

14 A   Yes, that's another aspect of it, yes.

15 Q   So it's just talking about dialing one number, maybe a

16 short number of an extension, and getting the phone forwarded

17 to another number, right?

18 A   Yes, that's one of the things they're talking about, yes.

19 Q   Okay, but nothing that you just read indicates that the

20 second number is somehow private and not to be disclosed

21 publicly?

22 A   Well, it's not a publicly disclosed -- it's talking about

23 the free numbers beginning with 0-800 and national call

24 numbers of enterprises. So those are those kinds of numbers

25 and then there's everything else, which are not enterprise

Polish - Cross   86

1   published numbers, and it's simply making a link between --

2   it allows you to send text messages to these published

3   numbers and have them go to non-published numbers, which I

4   think clearly maps onto what the Court has construed the

5   second identifier to be.

6   Q   Well, if the jury disagrees with you that what you just

7   read into the record is saying what you just said then they

8   should not find that Sonera anticipates the claims, right?

9   A   Well, so I am pointing to the new MSISDN as you see it in

10   Figure 2 as the second identifier. If the jury doesn't agree

11   with me that that's the second identifier, then there's no

12   anticipation. There certainly is obviousness given that --

13   this was an argument that Dr. Akl brought up in his rebuttal

14   of my arguments, which is why I brought Varesto in to show

15   their second identifier is exactly the second identifier

16   that's talked about in the '870 Patent, the IMSI.

17   Q   So you brought Varesto in because of Dr. Akl's opinions

18   regarding your opinion, right?

19   A   I brought it in as a response to his opinion. I believe

20   that the Sonera patent anticipates that every element is

21   expressly taught there, as I think this paragraph shows, but

22   if the jury doesn't agree then they can find obviousness with

23   Varesto.

24   Q   Well, we're going to talk about Varesto.

25   MR. GOETTLE: Mr. Dyer, can you go back to Dr.

Polish - Cross   87

1   Polish's slides and go to slide 35?

2   (Pause.)

3   BY MR. GOETTLE:

4   Q   Okay, we're on your slide 35?

5   A   Yes.

6   Q   All right. Now we're dealing with Claim 7?

7   A   Okay, yes.

8   Q   Okay. And Claim 7 requires that the inquiry is sent to a

9   specific network element and then it is that network element

10 that determines the information, right?

11 A   Yes.

12 Q   Okay. And the inquiry that you point to -- well, I

13 think, I think the inquiry that you point to is the green

14 line?

15 A   Yes.

16 Q   Okay. And that green line goes to the service node?

17 A   That's correct.

18 Q   Okay. And it is the HLR that's determining the

19 information?

20 A   Well, the service node is determining the information

21 with the help of the HLR.

22 Q   I see. So if the jury was to find that that's not what

23 that claim means and it actually means that in your scenario

24 it's the service node that receives the inquiry and alone

25 figures out -- determines said information, if the jury

1 concludes that the claim would be requiring that the service

2 node determine the information, then they should not find

3 that Sonera anticipates Claim 7?

4 A   Can you ask that question again?   There was --

5 Q   Sure.

6 A   -- too much there.

7 Q   It was? Okay. Well, I'll try it again. If the jury

8 finds that the service node that receives the inquiry under

9 the -- to be invalidating that service node itself without

10 the help of the HLR --

11 A   You've just lost me again.

12 Q   Okay, let me try again.

13 A   Okay.

14 Q   The HLR is what's making the determination, right?

15 A   Well, the HLR is involved in the determination. The

16 service node makes a request of the HLR and that process

17 determines.

18 Q   That's your testimony, but if the jury doesn't agree with

19 you then they should not find that Sonera anticipates the

20 claim?

21 A   Well, Claim 7 requires that the same node that's

22 receiving the inquiry is also doing the determining and I've

23 identified the service node as what's doing the determining.

24 If for some reason that's not the case, then that's not the

25 case, but I think it's clear from this diagram that the

Polish - Cross   89

1   service node is receiving the query and is also doing the

2   determining with the HLR.

3   Q   Okay. And the same would go for Claim 113, if the jury

4   disagrees with that analysis then the jury should not find

5   that Claim 113 is anticipated by Sonera?

6   A   So again -- well, let's go back to -- 113 you're saying

7   -- in 113 it's supposed to not -- it's supposed to do mapping

8   without an HLR.

9   MR. GOETTLE: Can you put up slide 38?

10 BY MR. GOETTLE:

11 Q   Claim 113 includes a similar limitation as Claim 7 that

12 we were just talking about, correct?

13 A   Yes.

14 Q   Okay. And Claim 112 is what says where the mapping is

15 not done by the HLR, but that's not in Claim 113, specific

16 language in Claim 113, right?

17 A   So what's your question there?

18 Q   Claim 113 is very similar to Claim 7, right?

19 A   Yes.

20 Q   Okay. So if the jury doesn't agree with your opinion on

21 Claim 7 for the reasons we talked about, they should also

22 find that Varesto does not anticipate Claim 113?

23 A   I don't think I was saying that Varesto anticipates.

24 Q   Oh, I'm sorry, did I say Varesto? I slipped, Sonera.

25 Let me try it again.

1 A   Okay.

2 Q   I think I did it at the same exact time yesterday. If

3 the jury finds -- for the same reasons that we just talked

4 about on Claim 7, if the jury finds that Sonera, that the

5 service node in Sonera is not doing the determining -- are

6 you with me?

7 A   I think so.

8 Q   Okay, then the jury should not find that Sonera

9 anticipates Claim 113?

10   (Pause.)

11 A   I see what you're asking, okay. If the jury finds that

12 the service node is not doing the determining then -- in

13 Sonera, then I suppose it would not anticipate.

14 Q   And one reason the jury might find that, right, sir, is

15 because the HLR is what's doing the determining?

16 A   Well, the HLR is a database, and the database is being

17 queried and it's responding to the query. It's just a

18 database. The determining is being done by the service node

19 using this particular database.

20 Q   And if the jury doesn't agree with that analysis then the

21 jury should find that Sonera does not anticipate Claim 7 or

22 Claim 113?

23 A   I suppose. I mean, I don't know that there's that much

24 depth to that particular question. The service node is using

25 a database called the HLR and if that's not the case, then I

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1   suppose it's not anticipated.

2   MR. GOETTLE: Slide 47.

3   BY MR. GOETTLE:

4   Q   So slide 47 is showing the figure from the other

5   reference, not Sonera but Varesto, correct?

6   A   Yes, this is Figure 1 of Varesto.

7   Q   Okay. And like Sonera, Varesto is disclosed with respect

8   to a GSM network, correct?

9   A   Yes.

10   Q   Okay. And I think we established earlier that in GSM the

11   SMSC, short message service center, stores and forwards, but

12   does not query?

13   A   Well, the SMSC stores and forwards; it may query, but the

14   point is at least it's storing and forwarding.

15   Q   Okay. And that -- the box that's titled -- oh, I just --

16   SMS-GW, do you see that?

17   A   Yes.

18   Q   That's the same as -- in Varesto it's disclosed as being

19   the same thing that we talked about with respect to Sonera,

20   the SMS-GMSC?

21   A   Yes, I think that's roughly correct.

22   Q   Okay. Then we talked earlier about if the jury finds

23   that an SMS-GMSC is an internal element of the cellular

24   network and that it is doing the querying that you referred

25   to, then they should not find that Varesto teaches the claim

1 limitations regarding an external messaging server doing the

2 query?

3 A   Well, I think as I was saying before, that you can

4 combine these boxes and you can combine a piece of the boxes

5 -- the point of the SMS-GW there is it's a gateway; so it's

6 the connection point, so that's where the query is coming

7 from. And what I was pointing you to in Sonera was that they

8 were making it clear that you could move some of that

9 functionality around and Dr. Akl talked about that that was

10 okay too. So you could -- you would -- one would know you

11 can implement these, you can implement that functionality

12 within the SMSC and do the querying from the SMSC.

13 Q   Even though that's not how the GSM standard is written?

14 A   I don't know that that's not how the GSM standard is

15 written.

16 Q   You don't know one way or the other?

17 A   That's correct.

18 Q   Okay.

19   (Pause.)

20 Q   Oh, and you know what, I just want to have a point of

21 clarification. During your direct examination you referred

22 to certain statements or comments that Dr. Akl made that you

23 were responding to, right?

24 A   Yes.

25 Q   Okay. But just to be clear, the jury hasn't seen or

Polish - Redirect   93

1   heard from Dr. Akl on your invalidity opinions yet, right?

2   A   Right. I was referring to his statements on infringement

3   and there were arguments he -- there were comments he was

4   making on infringement questions about various things and

5   also I was referring in particular to the questions I guess

6   around why I brought in Varesto and other obviousness

7   arguments, those were in response to arguments that Dr. Akl

8   made in his expert reports responding to me.

9   MR. GOETTLE: No further questions, your Honor.

10   (Pause.)

11   MR. FINKELSON: May I approach, your Honor?

12   THE COURT: You may.

13   REDIRECT EXAMINATION

14 BY MR. FINKELSON:

15 Q   On this question of Viaresto and whether the SMSC sends

16 and receives messages from inside the cellular network --

17   MR. FINKELSON: -- can we see Dr. Polish's slide 48?

18 BY MR. FINKELSON:

19 Q   I think Comcast's Counsel was just pointing you to 47,

20 but if you'll turn to your slide 48. And, Dr. Polish, is

21 this part of your discussion of Viaresto?

22 A   Yes, it is.

23 Q   And have you included both text and a figure from

24 Viaresto?

25 A   Yes, I have.

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1   Q   And what does the text of Viaresto in column 16 say about

2   whether messages are sent to and from the SMSC from the

3   network infrastructure?

4   A   So what I have here is "the service units outside the

5   network infrastructure," paren, "(the short message service

6   center) SMSC associated with the short message services" --

7   there's a bunch of parens here -- "(and the Intelegain

8   network shown in Figure 1)," close paren, "and to the

9   terminals and communicates with the maintenance system of the

10 network."

11 Q   And those service units outside the network

12 infrastructure, do they include, according to this text, the

13 short message service center, SMSC?

14 A   Yes.

15 Q   And according to this text is the service unit outside

16 the network infrastructure, including the SMSC receiving and

17 sending messages to and from the service profile register SPR

18 that you've highlighted?

19 A   Yes.

20 Q   Does that inform your conclusions about whether the SMSC

21 is itself communicating with the cellular network in the

22 Viaresto reference?

23 A   Yes.   It's clearly communicating with the cellular

24 network across the network boundary.

25 Q   Has Comcast identified, Dr. Polish, any proof that Sonera

Polish - Redirect   95

1   or Viaresto was considered by the United States Patent Office

2   when it issued the '870 Patent?

3   A   No; I don't believe it has, no.

4   Q   In your opinion, had Sonera or Viaresto been considered

5   by the United States Patent Office would the Patent Office

6   have cited Sonera and Viaresto on the face of the '870

7   Patent?

8   A   Yes, they certainly would have.

9   Q   In your opinion, had Sonera or Viaresto been considered

10   by the United States Patent Office, do you think Comcast

11   would point out to this jury where the Patent Office said,

12   hey, we considered Sonera and Viaresto?

13   MR. GOETTLE: Objection, your Honor. It's

14   argumentative, it's leading and it calls for speculation -- I

15   take back the leading part, but it calls for speculation and

16   it's argumentative.

17   MR. FINKELSON: Withdrawn, your Honor.

18   THE COURT: And the witness has already said he is

19   not an expert in Patent Office procedures; is that a correct

20   statement?

21   THE WITNESS: That's a correct statement, sir.

22   THE COURT: So --

23   MR. FINKELSON: I withdraw the question, your Honor.

24   THE COURT: Then I don't have to rule.

25   (Laughter.)

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1   MR. FINKELSON: I had a sense of where you were

2   going, so --

3   THE COURT: Thank you.

4   (Laughter.)

5   BY MR. FINKELSON:

6   Q   Have you reviewed the reexamination file with respect to

7   the '870 Patent?

8   A   Yes, I have.

9   Q   Is that the reexamination of the '870 Patent that was

10   initiated by Comcast?

11   A   Yes.

12   Q   Do you understand that in the reexamination the Patent

13   Office considered no new prior art other than the prior art

14   that Comcast provided?

15   A   Yes, that's what the file history indicates.

16   MR. FINKELSON: I have no further questions -- oh,

17   briefly, your Honor. I neglected to do this during the

18   direct examination. There are four exhibits in Dr. Polish's

19   witness binder that are not yet admitted into evidence, but

20   for which I understand there's no objection, and those are

21   DX-244, 245, 248, and 249.

22   THE COURT: Any objection?

23   MR. GOETTLE: No objection, your Honor.

24   THE COURT: Exhibits 244, 245, 248, and 249 are

25   received.

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1   (Defendants' Exhibits DX-244, 245, 248, and 249

2   received in evidence.)

3   MR. FINKELSON: Thank you, your Honor.

4   MR. GOETTLE: Your Honor, I can move in my drawings

5   that I had made yesterday and today?

6   THE COURT: Yes.

7   MR. GOETTLE: They are Plaintiffs' Drawing 4,

8   Plaintiffs' Drawing 5, Plaintiffs' Drawing 6, Plaintiffs'

9   Drawing 7, Plaintiffs' Drawing 8, and Plaintiffs' Drawing 9.

10   THE COURT: They're received.

11   (Plaintiffs' Drawings 4 through 9 received in

12   evidence.)

13   MR. GOETTLE: Thank you, your Honor.

14   THE COURT: Well, first, that concludes your

15   testimony, Dr. Polish. You may step down.

16   (Witness excused.)

17   THE COURT: Counsel, I think we ought to go to

18   sidebar and talk about a schedule.

19   Ladies and gentlemen, you can take a stand-up, if

20   you wish, if you wish.

21   (Sidebar discussion held as follows:)

22   THE COURT: I'm wondering, I gather the liability

23   phase of your expert testimony is completed?

24   MR. FINKELSON: You hope and you gather correctly.

25   THE COURT: And what we have left in your case is

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1   damages?

2   MR. FINKELSON: We do. We have a very short

3   deposition clip in support of the damages case, very short,

4   it's under five minutes --

5   MR. RIOPELLE: Four minutes.

6   MR. FINKELSON: -- and then two damages witnesses.

7   We have a few evidentiary matters to deal with.

8   THE COURT: And you're going to handle those. I've

9   been thinking, is there a problem with putting -- how many

10   liability experts do you have on invalidity? Dr. Akl, of

11   course.

12   MR. GOETTLE: Dr. Akl on invalidity will be it.

13   THE COURT: Is there a problem with putting Akl on

14   out of turn tomorrow?

15   MR. HANGLEY: Are you ready? This poor guy is

16   exhausted.

17   MR. GOETTLE: There is a problem, your Honor,

18   because I've been thinking about this schedule and I have not

19   started to just think about it today.

20   MR. FINKELSON: And, your Honor, obviously --

21   MR. GOETTLE: I mean --

22   MR. FINKELSON: -- we'll do whatever the Court

23   prefers, but I will say, I mean, having been in a similar

24   position to Mr. Goettle and understanding what his

25   expectations were, I think that would be a tremendous task.

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1   MR. HANGLEY: We had conversations about it, David

2 and I, and we agreed --

3   MR. FINKELSON: Yeah.

4   MR. HANGLEY: -- that we weren't going to put on

5 anything until Tuesday morning.

6   MR. FINKELSON: Absolutely, a hundred percent.

7   MR. HANGLEY: So I won't be the man in the barrel,

8 but Goettle will.

9   MR. GOETTLE: I would prefer not, your Honor, but if

10 that's what you would like --

11   THE COURT: We lose two days.

12   MR. GOETTLE: Well, I don't know how it shakes out,

13 your Honor, but --

14   MR. HANGLEY: Well, we lose a day and a half.

15   MR. FINKELSON: Because we can go until lunch

16 tomorrow and that would allow us to get through at a minimum,

17 I would think, one of our -- you know, one of our two damages

18 experts tomorrow. I mean, I know it's an imposition on the

19 jury to come for just a half day, but we certainly can do

20 that and that's what --

21   MR. RIOPELLE: We're prepared to do -- to put on Dr.

22 Cox --

23   THE COURT: Okay.

24   MR. RIOPELLE: -- first thing and I would hope we

25 get through Dr. Cox --

1   MR. HANGLEY: I think that's what you think too,

2   right?

3   THE COURT: What about putting Akl on on Monday?

4   MR. GOETTLE: Oh, that's definitely doable. It will

5   be --

6   THE COURT: Because otherwise we're not --

7   MR. HANGLEY: Is that okay with you?

8   MR. GOETTLE: It will be --

9   MR. HANGLEY: You're the one that's not going to --

10   MR. FINKELSON: Yeah, you would come on and then

11   you'd finish with Dippon after the fact.

12   MR. HANGLEY: Does that work for you?

13   MR. GOETTLE: That's fine, your Honor. Obviously,

14   I'm not trying to put myself in your shoes, it's just that I

15   don't anticipate Akl to be that long and to have them come --

16   people drive that far for that short amount of time --

17   THE COURT: How long do you expect Akl to be?

18   MR. GOETTLE: Well, I haven't prepared it, but it's

19   only to reference -- I'm think it's probably at the most a

20   two -- at the most, I mean, your direct was an hour and a

21   half, so I would think that that's kind of what ours would

22   be.

23   MR. FINKELSON: And is that -- are there other

24   rebuttal witnesses --

25   MR. GOETTLE: And there might be --

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1   MR. FINKELSON: -- that you are -- and I'm not

2   asking for your strategy, but --

3   MR. GOETTLE: I know you're not and I don't know, I

4   don't -- if there are, they will be short.

5   MR. FINKELSON: You're thinking past -- you're not

6   thinking past --

7   MR. GOETTLE: I was just trying to get --

8   MR. FINKELSON: -- (indiscernible) o'clock and I

9   understand that.

10   THE COURT: Well, why don't you think about --

11   MR. GOETTLE: Okay.

12   THE COURT: -- that and --

13   MR. HANGLEY: Another wrinkle -- I interrupted you.

14   I've been doing that to witnesses all week, so now I'm moving

15   up in grade.

16   THE COURT: Well, think about that --

17   MR. GOETTLE: Okay.

18   THE COURT: -- and let me know what you think, but

19   we don't have to decide that issue until tomorrow.

20   MR. GOETTLE: Okay.

21   MR. FINKELSON: Yeah, and we would -- if that's --

22   if you're willing to proceed that way, we're certainly

23   willing to proceed in that.

24   THE COURT: So we would go -- how many rebuttal

25   witnesses do you have? Akl and --

1   MR. GOETTLE: Well, we -- on liability you mean? At

2   most, Dr. Akl and Mr. Hoelzle.

3   MR. HANGLEY: And one other possible.

4   MR. GOETTLE: Oh, and one --

5   MR. RIOPELLE: (Indiscernible) --

6   MR. GOETTLE: Well, no, we're just talking

7   liability. The idea is we would put on our liability

8   rebuttal --

9   THE COURT: The idea is --

10   MR. GOETTLE: -- before we finish damages.

11   THE COURT: -- do something on Monday --

12   MR. HANGLEY: Without prejudice to any --

13   THE COURT: Yes.

14   MR. HANGLEY: -- motions that we might have at the

15   end of their case.

16   THE COURT: Motions?

17   MR. HANGLEY: Yes.

18   MR. GOETTLE: Oral motions.

19   THE COURT: Oral motions? I think I'm going to

20   write an opinion using only your acronyms and let you figure

21   out what it says.

22   (Laughter.)

23   MR. FINKELSON: You should try letting us agree on

24   the glossary of terms beforehand.

25   (Laughter.)

1   THE COURT: All right. Think about how --

2   MR. GOETTLE: Yes.

3   THE COURT: -- we could utilize Monday.

4   MR. GOETTLE: Okay.

5   THE COURT: For tomorrow, though, we'll go with --

6   in turn with your damages expert. And we'll recess about

7   what time?

8   MR. RIOPELLE: I was hoping at noon because I have a

9   2:00 o'clock flight. I need to get to -- I'm trying to get

10 to Norfolk, Virginia by 4:00 o'clock (indiscernible) --

11   THE COURT: No, we're not going to let you miss your

12 flight. Trying a case like this is cruel and unusual

13 punishment, but with an additional family obligation, I don't

14 think there's a word in the Constitution to describe it --

15   (Laughter.)

16   MR. RIOPELLE: I appreciate it.

17   THE COURT: -- and so we're going to accommodate

18 you.

19   MR. RIOPELLE: I appreciate it, your Honor.

20   THE COURT: But what we'll think about is how we can

21 fill in Monday --

22   MR. GOETTLE: Okay.

23   THE COURT: -- without Mr. Riopelle.

24   (Sidebar discussion concluded.)

25   THE COURT: I have good news and you can be seated.

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1   Tomorrow will be a short day. We'll recess sometime around

2   lunch for the day. I'm not sure what the schedule will be on

3   Monday, I'll let you know tomorrow, but for now know that you

4   will be here until -- it's 20 of 5:00 now, you will not be

5   here that late tomorrow. So let's try to get here on time,

6   9:30, so that we could start promptly at 9:30.

7   And now my usual day-end instructions. No talking

8   among yourselves about the case -- you can talk about other

9   things, not the case -- and no reading anything that might be

10   published in the newspaper, no listening to anything that

11   might be broadcast on radio, no viewing anything that might

12   be broadcast on television. If anyone at home asks you what

13   you did today, where'd you go out, what did you do? Nothing,

14   that's what I expect you to say. Don't talk about the case.

15   We're trying to keep the case going and I think it

16   is moving on schedule, and I'll have more to say on that

17   tomorrow.

18   Anything else?

19   MR. GOETTLE: No, your Honor.

20   MR. FINKELSON: Nothing else, your Honor. Thank

21   you.

22   THE DEPUTY CLERK: All rise.

23   THE COURT: 9:30 tomorrow morning.

24   (Jury out at 4:39 o'clock p.m.)

25   THE COURT: Be seated, everyone. I think we ought

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1   to get back to the charge, we can do that tomorrow. We'll

2   probably recess for lunch a little early so that Mr. Riopelle

3   can catch his plane and then come back and address the few

4   issues that remain on the charge. The one major issue is --

5   is it running or rolling? I know I got it wrong --

6   MR. HANGLEY: Running.

7   MR. GOETTLE: Running.

8   THE COURT: Running, the -- Comcast's position on

9   running versus lump-sum royalty. I think that's the only

10   issue I have to get back into under the law.

11   Is there anything else we need do?

12   MR. RIOPELLE: Your Honor, one housekeeping thing.

13   We would like to have been received into evidence as DX-902

14   the video that we played of Mr. Marcus on his cross-

15   examination and as DX-903 the transcript, because I was

16   looking -- when I was looking through the transcript of the

17   trial, all it says on there is a video was played. And so

18   the record was complete, I wanted to mark these and have them

19   submitted.

20   THE COURT: So that we have a record of it, but the

21   entire video and the entire transcript are not in evidence.

22   The only portion of the video and the transcript that are in

23   evidence are the portions that deal with the cross-

24   examination.

25   MR. FINKELSON: And I think those are the only

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1   portions of the transcript and the video that are on --

2   THE COURT: Did you play the whole -- I'm sorry, I

3   thought it was a more substantial video.

4   MR. RIOPELLE: No, no, we only put on the CD what we

5   played and the only thing we have on the transcript is what

6   was said in that video, we did not put on the entire --

7   nothing is on here that was not played in front of the jury.

8   THE COURT: All right. What is the position of

9   Counsel on whether things like the video and the transcript

10   used only in cross-examination go out with the jury?

11   MR. HOFFMAN: We object, your Honor. Jason Hoffman

12   on behalf of Comcast. We would object, it's not evidence.

13   It certainly was used for impeachment, but it's not evidence

14   -- I mean, and it should be marked for the record so the

15   record can be complete and we don't object to it being marked

16   for the record, but we would object that it was used for

17   impeachment purposes, that it not go back to the jury, just

18   like with every other piece of evidence that is being used on

19   cross that hasn't been admitted.

20   MR. RIOPELLE: Well, and I guess that's maybe the

21   issue. I just want to be treated consistently. So for

22   example, Mr. Goettle made a whole bunch of drawings today,

23   which I think they want to send back to the jury, they were

24   only used on cross-examination. So if they're going to go

25   back, then I believe this should go back; if they're not

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1 going to go back, then this shouldn't go back. But the

2 primary reason is to make sure it's part of the record and

3 then as far as treating things on cross, that should just be

4 treated consistently on both sides, that's all we ask.

5   THE COURT: Very good answer. Let's turn to Mr.

6 Goettle.

7   MR. GOETTLE: Your Honor, this is the first I'm

8 hearing about it, can we take it up tomorrow morning --

9   THE COURT: Yes.

10   MR. GOETTLE: -- and just let me think about it?

11   THE COURT: Well, it doesn't have to be done

12 tomorrow morning --

13   MR. GOETTLE: Is that all right?

14   THE COURT: -- we can do that --

15   MR. GOETTLE: I'm sorry, thank you.

16   THE COURT: -- tomorrow afternoon, although it's

17 your issue.

18   MR. RIOPELLE: Somebody else on my team can do this

19 one.

20   THE COURT: Do you think he's up to it?

21   (Laughter.)

22   MR. RIOPELLE: I owe him so much right now, I -- he

23 has been carrying a lot of water because I've been running

24 away from it. He's got the lump sum of water and I've been

25 the running (indiscernible) --

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1   THE COURT: No, you're doing fine.

2   MR. RIOPELLE: We will have at the very beginning

3   tomorrow two interro -- two RFAs or interrogatories? --

4   interrogatory responses to read in, I think it will probably

5   take 15 minutes.

6   THE COURT: Fine. Give me those numbers again, the

7   Marcus video and dep.

8   MR. RIOPELLE: The video, your Honor, is marked as

9   DX-902 and the transcript of the video is marked as DX-903.

10   THE COURT: Thank you. All right, we'll address

11   that issue tomorrow.

12   Anything else we need to talk about tonight?

13   MR. GOETTLE: No, your Honor.

14   THE COURT: Then we'll be in recess until 9:30

15   tomorrow morning. You may go about your business.

16   (Proceedings adjourned at 4:44 o'clock p.m.)

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CERTIFICATION

          I hereby certify that the foregoing is a correct

transcript from the electronic sound recording of the

proceedings in the above-entitled matter.

S:/Geraldine C. Laws, CET   Date 2/9/17
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